Defense Environmental Restoration and Waste Management

Department of Energy FY 1998 Budget Request to Congress (discretionary dollars in thousands)

	FY 1996 Current Appropriation	FY 1996 Comparable Appropriation	FY 1997 Current Appropriation	FY 1997 Comparable Appropriation	FY 1998 Request
Defense Environmental Restoration and Waste Managemen	nt				
Environmental restoration	1,456,270	1,804,052	1,762,194	1,762,194	1,744,573
Waste management	2,412,098	1,801,714		1,490,320	1,455,576
Technology development	396,104	291,491	295,215	295,215	257,881
Transportation management	12,486				
Program direction		473,751	411,511	411,511	388,251
Nuclear material and facility stabilization	1,510,370	1,170,252	1,297,590	1,173,718	1,118,114
Compliance and program coordination	42,968				
Analysis, education, and risk management	80,757				
Policy and management	, 	25,541	23,155	23,155	23,104
Environmental science program		63,875	62,124	62,124	50,000
Environmental management privatization		-	170,000		
Closure projects			15,000	15,000	15,000
Def. EM Privatization init. (Fixed asset acq.)			160,000		
Subtotal, Defense environmental management	5,911,053	5,630,676	5,778,236	5,233,237	5,052,499
Use of prior year balances & other adjustments	-366,248	-423,785	-158,932	-158,932	
Total, Defense Env. Restoration & Waste Mgmt.	5,544,805	5,206,891	5,619,304	5,074,305	5,052,499
Defense Assets Acquisition — Incremental Funding					
Waste management		140,056		91,127	80,768
Nuclear material and facility stabilization		106,721		123,872	84,907
Total, Incremental Funding		246,777		214,999	165,675
Total, Def. Env. Mgmt. plus Incremental Construction	5,544,805	5,453,668			5,218,174
Defense Assets Acquisition — Extra for Transitional Full Co.	notruction Fund	lina			
Waste management	istruction Fund	y 			377,550
Nuclear material and facility stabilization					99,439
Total, Extra for Transitional Full Construction Funding					476,989
Total, Def. Environmental Mgmt. plus Construction	5,544,805	5,453,668	5,619,304	5,289,304	5,695,163
rotal, Doi: Environmental trigint: place constituction	0,011,000	0,100,000	0,010,001	0,200,001	0,000,100
EM Privatization					
Def. EM privatization init. (Fixed asset acquisition)				330,000	1,006,000
Uranium Enrichment D&D Fund Discretionary Payments					
Transfer payment from Defense ER&WM	-350,000	-350,000	-376,648	-376,648	-388,000
Transfer payment nom Defende Ertavivi	330,000	330,000	370,040	010,0 1 0	300,000

DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

PROPOSED APPROPRIATION LANGUAGE

For Department of Energy expenses, including [the purchase, construction and acquisition of plant and] capital equipment and other expenses necessary for atomic energy defense environmental restoration and waste management activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101, et seq.), including the [acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion; and the] purchase of passenger motor vehicles (not to exceed [20] 6, of which [19] 6 are for replacement only), [\$5,459,304,000] \$5,052,449,000, to become available October 1, 1997 and \$4,700,000,000 to become available October 1, 1998, all of which shall [to] remain available until expended [and, in addition \$160,000,000 for privatization initiatives, to remain available until expended]. (Energy and Water Development Appropriations Act, 1997.)

EXPLANATION OF CHANGE

The primary change is the exclusion of reference to construction, which is proposed for funding in the National Defense Asset Acquisition appropriation.

DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL MANAGEMENT

PROGRAM MISSION

The Environmental Management (EM) program is responsible for identifying and reducing risks and managing waste at sites where the Department carried out nuclear energy or weapons research and production activities. These past efforts resulted in radioactive, hazardous, and mixed waste contamination which requires remediation, stabilization, or some other type of action. When the EM program was established in late 1989, it inherited a legacy with significant environmental and political challenges. The 130 total EM sites in over 30 States have different functions, geographies, and degrees and types of contamination. These sites include contaminated surface water or groundwater, soil, and structures totaling over 3,300 square miles of contaminated area. No other nation, government, or private entity has attempted a cleanup program of this scope and magnitude before.

This program is budgeted under six appropriation accounts: Defense Environmental Restoration and Waste Management, Energy Supply, Research and Development, and the Uranium Enrichment Decontamination and Decommissioning Fund, which represents the three appropriation structure EM used in the FY 1997 budget process; and National Defense Asset Acquisition, Energy Assets Acquisition, and Defense Environmental Management Privatization, which are three new appropriations introduced in the FY 1998 budget process. Under the Defense account, EM manages and cleans up sites utilized for the Defense mission during the Cold War. The Defense Environmental Restoration and Waste Management request for FY 1998 is \$5,052,499,000, a decrease of \$566,805,000 below the FY 1997 appropriation. The primary reason for this decrease is the removal of construction line-item projects and privatization initiatives into separate appropriation accounts.

Program Emphasis

The program must comply with a significant number of legal requirements which result from 103 Departmental compliance agreements and a multitude of Federal, State, and local health and safety environmental statutes. Bridging the gap between requirements in existing agreements, risks associated with conditions at the various sites, and available resources will be a challenge requiring increased cost efficiency through better project performance and cost containment. The program's main challenge is to develop a strategy, within existing and projected technical and financial constraints, that enables the Department to meet its commitments to the American people.

The nuclear weapons complex generated waste, pollution, and contamination which pose unique problems, including unprecedented volumes of contaminated soil and water, radiological hazards from special nuclear material, and a vast number of contaminated structures. Factories, laboratories, and thousands of square miles of land were devoted to the successful enterprise of producing tens of thousands of nuclear weapons in the name of national security. Much of this massive infrastructure, waste, and contamination still exists and is largely maintained, decommissioned, managed, and remediated by the EM program, which is sometimes referred to as the "cleanup program." EM is responsible for managing and addressing the environmental legacy resulting from the production of nuclear weapons; it has grown since its creation in 1989 in order to appropriately deal with the problems resulting from the nuclear weapons production era.

PROGRAM MISSION, ENVIRONMENTAL MANAGEMENT - DEFENSE (continued)

Program Emphasis (continued)

Today, the EM program is the world's largest environmental stewardship program, covering over 130 sites and facilities in over 30 States and territories. Some of the program's distinct characteristics include the presence of extremely hazardous materials in unstable conditions (i.e., high-level radioactive waste tanks and unstable Plutonium mixtures); extensive legally enforceable agreements with State and Federal regulators; and the presence of formal citizen advisory boards at the major DOE sites.

Compliance

• Effectively prioritize and sequence work covered by Federal and State agreements to incorporate relative risk and cost effectiveness.

Mortgage Reduction

• Expedite demolition work, waste shipments, and permanent storage efforts to reduce future costs associated with growing surveillance and maintenance and deactivation costs associated with maintaining buildings and facilities that are ready for demolition, and the high costs associated with temporarily storing and monitoring wastes that are ready for permanent disposal.

Risk Reduction

Perform risk analyses in the areas related to public/worker safety and health, and environmental safety. The results of earlier analyses were a factor in developing
prioritized requirements for FY 1998. The FY 1998 budget request continues to aggressively address and minimize urgent and near-term risk to workers, the public, and
the environment.

Environmental Restoration

- Reduce and/or eliminate the most urgent risks associated with contaminated soils, groundwater, surface water, and buildings at DOE and designated private facilities.
- Conduct activities to protect human health and the environment from risks posed by inactive and surplus DOE facilities and contaminated areas by remediating, decontaminating and dismantling sites, facilities, and contaminated areas in the most cost-efficient manner.
- Emphasize near-term site completions, while maximizing beneficial reuse of site lands and facilities.

Waste Management

- Oversee ongoing regulatory compliance activities to enable DOE to comply with environment, safety and health requirements.
- Operate the Defense Waste Processing Facility (DWPF) in South Carolina. The full performance capacity of the DWPF is 400 canisters per year. Experience gained during the operation of DWPF in FY 1996 and FY 1997 will allow for a managed increase in canister production rate in FY 1998. Projected rates in FY 1998 are a range of 125 to 200 canisters. Over the next several years, we expect the production rate to significantly increase.
- Open the Waste Isolation Pilot Plant in New Mexico. This plant, located in New Mexico, will open and begin receipt of Contact-Handled Transuranic Waste in FY 1998.

Closure Projects

• Provide funding to accelerate the closure of facilities or significantly reduce outyear mortgage costs.

PROGRAM MISSION, ENVIRONMENTAL MANAGEMENT - DEFENSE (continued)

Program Emphasis (continued)

EM Science Program

- Bridge the gap between broad fundamental research that has wide-ranging applicability and applied technology development.
- Include risk management and analysis activities to ensure integration of risk analysis into the decision making process.

Technology Development

- Develop innovative cleanup technologies that reduce risks to workers, public and the environment.
- Reduce costs of cleanup and/or provide cleanup solutions that currently do not exist.
- Establish a Technology Deployment Initiative to accelerate the rapid deployment of late stage technologies at DOE sites.

Nuclear Material & Facility Stabilization

- Manage a National program to stabilize and safeguard excess nuclear materials, currently stored in various forms and locations, to reduce the potential risks posed to workers and the public.
- Provide the means to achieve cost savings and efficiencies through deactivation of surplus facilities, which results in lower costs of maintaining facilities awaiting decontamination and decommissioning.
- Provide interim storage and stewardship of nuclear materials, including spent nuclear fuel, awaiting ultimate disposition.
- Support the Nation's nonproliferation goals and policies through the receipt and management of foreign research reactor spent nuclear fuel.
- Serve as the focal point for inter-office/field operations activities and responsibilities within the EM program, including serving as the advocate for the field at Headquarters.
- Provide policy direction for landlord planning and budgeting, including reducing site infrastructure costs and managing workforce restructuring.
- Focus national attention on the Transportation Management program and the Pollution Prevention program, to be responsive to the General Accounting Office and others who have advocated a national focus for EM programs that have impact across the DOE complex.

Policy and Management

• Provide funding for overall direction, planning, and management of the Environmental Management program and support various crosscutting activities, such as public accountability efforts; strategic planning activities; and information management infrastructure activities.

Program Direction

• Provide salaries, benefits, travel, and contractual support for the Federal workforce (3,026 FTEs nationwide in FY 1998) who are responsible for the overall direction and operation of the Environmental Management program.

Privatization

Provide up-front funding for DOE support of privatization of various DOE environmental management projects, such as projects to support commercial demonstrations of nuclear waste treatment, decontamination and decommissioning, or other cleanup services. These projects will demonstrate the financial and technical feasibility of private sector construction and operation of radioactive waste treatment facilities through the use of commercial capital and technology in return for service fees paid by DOE. This contractual approach is estimated to save 25% or more in life cycle costs over the traditional approach of having a contractor design, construct and operate a government-owned facility.

PROGRAM MISSION, ENVIRONMENTAL MANAGEMENT - DEFENSE (continued)

EM Performance Measures

EM has developed corporate-level performance measures to be used for both internal management and to meet external requirements. These performance measures are intended to focus the organization on accomplishing EM's mission and program outcomes, as well as those crosscutting areas essential to accomplishing program results effectively and efficiently (i.e., financial, safety and health, trust and confidence measures). While these measures are considered to be the core set of measures for EM, it is recognized that operations offices, sites, and project managers will also be assessing progress against milestones, cost and schedule variances, etc., to accomplish their project and contract work scope effectively and efficiently.

Waste Stored/Treated/Disposed

- Volume of waste treated by waste type (i.e., High-Level Waste, Transuranic, Mixed Low-Level Waste, Low-Level Waste) in cubic meters to reduce risk and cost.
- Volume of waste disposed or ready to be disposed by waste type in cubic meters to reduce risk and cost.
- Maintenance of safe and environmentally-compliant inventory (storage) by waste type in cubic meters, pending treatment and/or disposal.
- Development of partnerships with other DOE programs, stakeholders and regulators to find new and innovative ways of addressing waste management problems.

Release Sites Completed

- Number of assessments of release sites completed.
- Number of release sites completed overall.

Facilities Deactivated

- Number of facilities deactivated.
- Inventory of facilities by status (i.e., not yet deactivated and deactivated)

Facilities Decommissioned

- Number of assessments of facilities completed.
- Number of facilities completed overall.

Material Stabilized/Made Disposition Ready

- Quantity of material stabilized by material type (i.e., plutonium, uranium, and other nuclear material [in kg] and Spent Nuclear Fuel [SNF]).
- Inventory of materials by status (i.e., not yet stabilized, stabilized but not disposition ready, and disposition ready) and material type (i.e., plutonium, uranium, other nuclear material and SNF).
- Quantity of material made disposition ready by material type (i.e., plutonium, uranium, and other nuclear material and SNF).

Technology Development

- Number of alternative technology systems demonstrated to meet performance-specification-based needs as identified by the Site Technology Coordinating Groups.
- Number of alternative technology systems available for implementation with full cost and engineering performance data.

PROGRAM MISSION, ENVIRONMENTAL MANAGEMENT - DEFENSE (continued) <u>EM Performance Measures</u> (continued)

Privatization

- Increase the number of privatization projects.
- Increase the number of environmental cleanups completed.
- Improve the documentation of life cycle financial estimates for privatized projects to demonstrate savings and cost avoidances.
- Increase the number of open, fixed-price contracts for cleanup projects.
- Improve the documentation of schedule improvements as a result of privatized workscope.

Major Changes

• Re-Engineering: The Department has initiated a pilot program intended to evaluate opportunities to reduce the volume of newly generated waste and its associated management and disposal costs resulting from Departmental mission activities. Beginning in FY 1998, the Department will implement the Pilot Waste Management Re-Engineering Program at a limited number of sites, at which the responsibility for the newly generated waste management programs will be transferred from the Office of Environmental Management to the generating program. Throughout the implementation of the FY 1998 pilot, the regulatory accountability will remain with the program that currently holds the regulatory permits. In addition, EM will be responsible for any unavoidable funding shortfalls due to underestimates for FY 1998 waste generation.

The Department expects that this re-engineered waste management structure will result in increased awareness on the waste generating organizations' part, thereby creating a financial incentive to minimize waste generation. Waste generating programs will be able to clearly track the true cost of their waste generation, as well as incorporate the associated costs within the formulation of the outyear budgets. To the extent that the programs minimize waste generation, the savings will be available to support increased mission activity. The impacts of this pilot arrangement will be carefully evaluated throughout FY 1998, and will provide the basis of the Administration's decision regarding the continuation and/or expansion of the effort in FY 1999 and beyond. The Pilot Waste Management Re-Engineering Program was initiated in response to recommendations from several Departmental stakeholders, including the National Academy of Sciences and the Environmental Management Advisory Board.

• <u>Technology Deployment Initiative</u>: Beginning in FY 1998, a Technology Deployment Initiative will be established to accelerate the rapid deployment of late stage technologies at DOE sites.

DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL RESTORATION

PROGRAM MISSION

The Environmental Restoration (ER) program, within the Defense Environmental Restoration and Waste Management appropriation account, supports remediation activities at a large number of sites contaminated from past Defense-related nuclear operations. The overall ER program, within the Department of Energy (DOE) Environmental Management (EM) program, receives funding from three appropriation accounts: the Defense Environmental Restoration and Waste Management appropriation account, referred to as the "Defense" account; the Energy Supply, Research and Development appropriation account, referred to as the "Non-Defense" account; and the Uranium Enrichment Decontamination and Decommissioning (UE D&D) Fund appropriation account, referred to as the "UE D&D" account. The "Defense" account includes the major portion of the ER program activities.

The overall mission of the ER program is to protect human health and the environment from risks posed by inactive and surplus DOE-owned and privately- owned sites, facilities, and contaminated areas. These sites, facilities, and contaminated areas must be remediated and decommissioned in the most cost-efficient and responsible manner possible in order to provide for future beneficial use. Program responsibilities include remediation, decommissioning efforts, support of compliance oversight, surveillance and maintenance (S&M), landlord functions, and a prudent amount of program management and technical support activities.

This budget request includes: funds to carry out activities that must be undertaken immediately to minimize or prevent significant risk to workers, the public, or the environment; activities required by current Federal, State, and local regulatory agreements (in place or in negotiation); and support of other legal requirements, and DOE Orders. Activities supported are explained in more detail in the Program Performance Summary which follows this introduction.

This Program Mission section provides an overview of the entire ER program. The information discussed includes all three appropriation accounts ("Defense", "Non-Defense", and the "UE D&D"). Tables PM-1 through PM-6 (which immediately follow this introduction section) provide data that displays the status of the various ER program activities, cleanup versus assessment trends, and progress being achieved from a "National Perspective" regardless of the appropriation account.

EM PROGRAM VISION:

The EM program has been collecting data to assimilate into a Ten Year Plan which will layout timetables to complete cleanup at most sites within the next decade. This Ten Year Plan is central to bridging efforts of the past few years to the types of cleanups and time frames EM will encounter through 2006. Major changes have taken place over the last three years to improve the pace of cleanup, manage projects more effectively, eliminate inefficiencies and incorporate risk into decision-making. All of those efforts have made EM more successful at producing on-the-ground tangible results. Under the Ten Year Plan "vision," EM will complete cleanup at most sites within a decade, though treatment will continue for the few remaining waste streams at a small number of sites. This unifying vision will drive budget decisions, sequencing of projects, and actual actions taken to meet program objectives. This "vision" will be implemented in collaboration with regulators and stakeholders.

The EM vision will be guided by the following seven principles:

- · Eliminate the most urgent risks
- Reduce mortgage and support costs to free up resources for further risk reduction
- · Protect worker health and safety
- Reduce the generation of waste
- Create a collaborative relationship between DOE and its regulators and stakeholders
- Focus technology development on cost and risk reduction
- Integrate waste treatment and disposal across sites.

The overall ER Program is responsible for remediation of 132 geographic sites in 31 states and the territory of Puerto Rico. A graphical depiction can be found in Table PM-1, following this introduction section. The ER program responsibilities in the "Defense" account include 46 of these geographic sites in 18 states. Of the 46 sites, three are jointly funded by the "Defense" and the "Non-Defense" account and one site is funded from all three appropriation accounts.

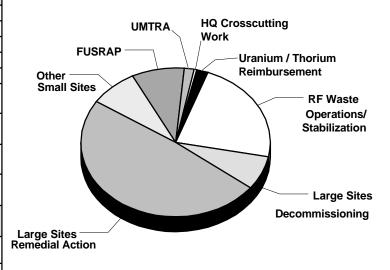
PROGRAM SHIFTS - NEW PERFORMANCE MEASURES

Consistent with the ER Strategic Plan, the ER program has been subdivided into several Strategic Program Areas: the Uranium Mill Tailings Remedial Action (UMTRA) program - 24 sites; the Formerly Utilized Sites Remedial Action Program (FUSRAP) - 46 sites; Other Small Sites - 47 sites; and 15 Large Sites composed of remedial action and decommissioning programs. Beginning in FY 1997, the ER program also includes the budget for the entire Rocky Flats, Colorado site. The ER activity also includes funding for reimbursement of Uranium/Thorium licensees for the Federal Government's share of their remediation costs; the Federal Contribution to the UE D&D account; and headquarters crosscutting activities.

The components of the overall ER program included in the FY 1998 request and their relative portion of that request are shown in the following table and pie chart. The ER "Defense" remediation activities are found in all the components except for the UMTRA, FUSRAP, and Uranium/Thorium Reimbursement activities.

ER Components	FY 1996 Current Appropriation	FY 1997 Current Appropriation	FY 1998 Congressional Request
UMTRA	\$66,746	\$49,788	\$33,778
FUSRAP	73,462	75,085	182,079
Other Small Sites	198,394	144,946	174,303
Large Sites Remedial Action	1,150,708	1,049,160	1,005,010
Large Sites Decommissioning	177,064	113,201	153,255
Rocky Flats Waste Operations/Stabilization Efforts	0	432,340	465,100
Uranium/Thorium Reimbursement	42,000	34,000	40,456
Federal Contribution to the UE D&D Appropriation Account	350,000	376,648	388,000
Headquarters Crosscutting Work	36,262	15,226	9,005
Request	2,094,636	2,290,394	2,450,986
UE D&D Account Offset	-350,000	-376,648	-388,000
Total Work Scope Requested	\$1,744,636	\$1,913,746	\$2,062,986

Environmental Restoration FY 1998 Congressional Request



NOTE: Reflects funding from the Defense, Non-Defense, and the UE D&D appropriation accounts.

The ER program has demonstrated significant cleanup progress in the UMTRA, FUSRAP, and Other Small Sites Strategic Program Areas. This has been achieved primarily by completion of remediation at numerous "release sites" and "facilities", ultimately leading to the completion of entire geographic sites each year. "Release sites" represent discrete areas of contamination at a particular site, and "facilities" are contaminated structures. Results in the Large Sites Remedial Action and Large Sites Decommissioning Program Areas are also measured by completion of "release sites" and "facilities", but the overall completion of these large geographic sites won't be achieved for some time. Performance is tracked in all Strategic Program Areas by measuring annual "release site" and "facility" completions.

ER Strategic Program Area	No. of Sites	No. of Release Sites	No. of Facilities	Total Environmental Restoration Program Summary/Description of Scope
UMTRA (Non-Defense)	24	48	0	 24 geographic sites requiring both surface remediation and verification of compliance with groundwater standards. Through FY 1996, surface remediation at 16 of the 24 geographic sites was completed.
FUSRAP (Non-Defense)	46	46	0	 46 formerly utilized sites in 14 states that have been identified as part of the FUSRAP Program. Through FY 1996, cleanup at 23 of the 46 geographic sites was completed.
Other Small Sites (Defense / Non-Defense)	47	1,356	199	 47 sites have been classified as Other Small Sites based on estimated cost of completion of \$150M or less. These sites have relatively short project durations, small lifecycle costs, and are well defined. Through FY 1996, 13 Other Small Sites have been completed (excluding long-term surveillance and monitoring) including the recent completions of the Oxnard facility in California, and the Inhalation Toxicology Research Lab in New Mexico. The 47 Other Small Sites are comprised of 1,356 release sites and 199 facilities. As of the end of FY 1996, 71% of all Other Small Site release sites (957) and 42% of all facilities (84) have been completed. The objective of this category, which includes both Defense and Non-Defense efforts, is to reduce relative risk and demonstrate progress by completion of another 25 small sites (about 19% of total ER geographic sites) from FY 1995 to the end of FY 2000.
Large Sites* Remedial Action	15	7,376	891	 15 geographic sites have been classified as Large Sites based on estimated cost of completion and/or complexity, and 10 of the 15 Large Sites have decommissioning programs, specifically focused on facilities and structures. Large Sites are the largest segment of Environmental Restoration repossibility and include sites with widely varied risk potential, possible large volumes of waste. They are typically driven by legal statutes and agreements. The objectives of this category are to sequence work based on relevant attributes and maintain or reduce the current risk state at each site. Over 7,376 release sites comprise the Large Sites components of the ER program. Through FY 1996, 29% (2,149) release sites have been completed.
Large Sites* Decommissioning				 Decommissioning activities represent the largest potential for reducing fixed infrastructure costs and, therefore, reducing the outyear mortgage. Over 891 facilities comprise the Large Sites component of the ER program. Through FY 1996, 17% (155 facilities) have been completed. The objectives of this category are to reduce long-term mortgage, address high risks, and maintain cost-effective funding levels.
TOTAL	132	8,826	1,090	Excludes Rocky Flats Waste Operations/Stabilization efforts
TOTAL Release Site/Facilities 9,916		916	*Funded by the Defense, Non-Defense, and the UE D&D appropriation accounts	

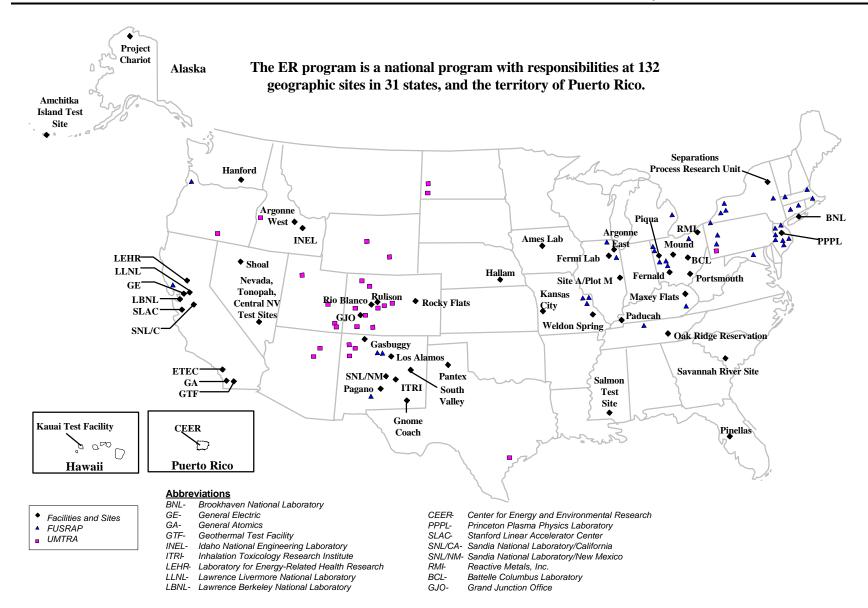
The ER program has established eight strategic goals which support the fulfillment of the overall EM mission.

- (1) Eliminate, reduce, or contain off-site contamination that may pose an adverse risk to the public and/or environment.
- (2) Prevent migration of contaminants through timely identification, reporting, assessment, application of best technologies, and safe storage.
- (3) Identify, decontaminate and/or control all sites and facilities formerly used by DOE and its contractors.
- (4) Eliminate, reduce, or contain on-site contamination that, in future land use, may pose an adverse risk to the public and/or environment.
- (5) Responsibly and cost effectively invest in activities, such as site safety, security, and utilities required to maintain the infrastructure to support the ER mission.
- (6) Expeditiously cleanup and where possible release facilities and land for public beneficial use.
- (7) Make prudent business decisions, such as, funding activities that support and enhance the effective and efficient achievement of the ER mission.
- (8) Increase efforts to identify sources, nature and extent of contamination to allow more accurate determination of relative risk, scope and cost of projects and establish data needs/objectives before characterization to increase the cost effectiveness and efficiency of characterization efforts.

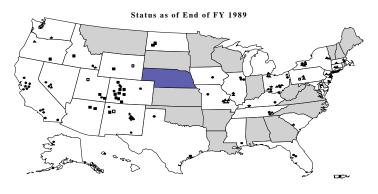
To provide maximum flexibility in addressing remediation efforts, all activities are budgeted under operating expenses and include capital equipment-type and construction-type activities. This is consistent with the manner in which ER activities were budgeted and approved by Congress in previous years. General crosscutting support efforts required for effective management and control of ER activities are also included in this budget.

Specific information relating to program diversity, performance measures, and assessment versus cleanup trends are presented in the following PM-1 through PM-6 tables for the overall ER program. These tables (PM-1 through PM-6) are presented from a "National Perspective" and portray data from all three appropriation accounts for the purpose of demonstrating how the entire ER program fits together.

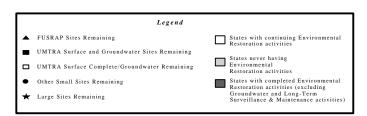
The ER Program Performance Summary for the "Defense" account following this section provides additional program specific information and tabular presentations for the "Defense" portion of the program. This includes cleanup versus assessment trends, funding by major ER component, and geographic site completion information for "Defense" activities.



The ER program has continued to achieve results by demonstrating progress in a number of states, by completing cleanup of entire geographic sites, and completion of release sites and facilities. The following graphic demonstrates how ER progress will be achieved over time, showing annual geographic site completions both over time and within each state or territory.

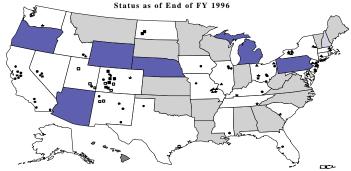


- 9 of 46 FUSRAP sites complete
- Surface remediation complete at 4 of the 24 UMTRA sites
- The Program inherited long-term surveillance and maintenance responsibility for two Other Small Sites that were completed prior to 1989
- Cleanup complete in Nebraska

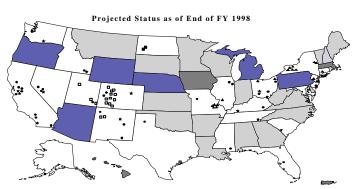


NOTE:

Based on funding from Defense, Non-Defense, UE D&D appropriation accounts. Cleanup excludes long term groundwater remediation projects and long term surveillance and maintenance.

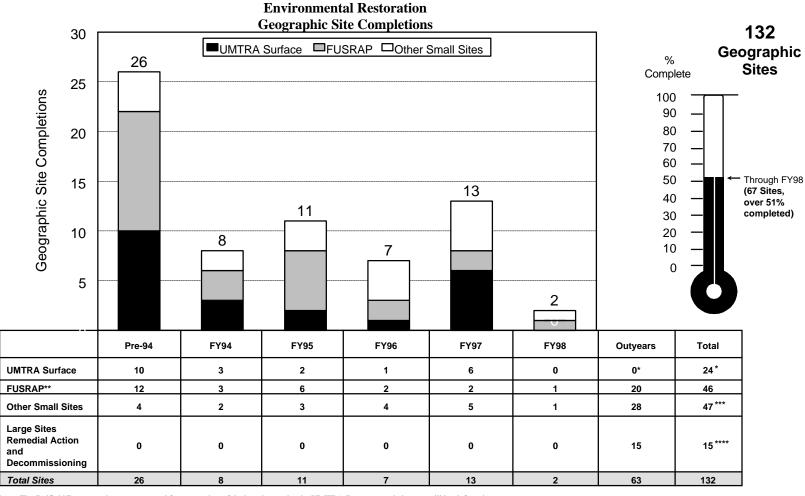


- 14 additional FUSRAP sites complete bringing the total to 23 out of 46
 Surface remediation complete at 12 additional UMTRA sites bringing the total to 16 out of 24
- 11 Other Small Sites completed bringing the total to 13 out of 47
- These additional site completions result in six additional states (Oregon, Arizona, Wyoming, Michigan, Hawaii, and Pennsylvania) being completed bringing the total to 7



- 3 additional FUSRAP sites complete bringing the total to 26 out of 46*
- Surface remediation complete at 6 additional UMTRA sites completing the surface program*
- 6 Other Small Sites completed bringing the total to 19 out of 47
- These additional site completions result in two additional states (Iowa, and Massassachusets) and the territory of Puerto Rico being completed bringing the total to 10
- * Belfield/Bowman sites are proposed for revocation of designation under the UMTRA Program, and cleanup will be deferred, per state agreement.

In order to demonstrate annual progress, the chart below provides actual and planned geographic site completions. Large Site completions will not be realized until after FY 2000. The ER program will have completed work at over 51% of the geographic sites under its responsibility by the end of FY 1998.



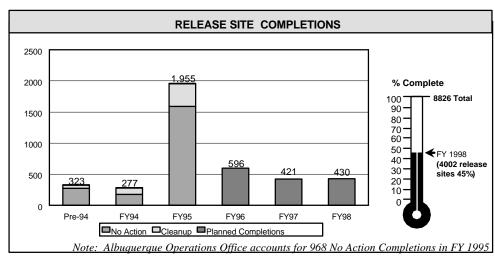
^{*} The Belfield/Bowman sites are proposed for revocation of designation under the UMTRA Program, and cleanup will be deferred, per state agreement.

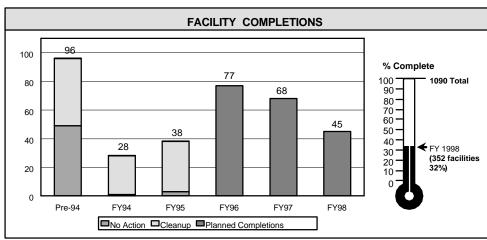
^{**} Increased funding for each fiscal year, as currently requested, will result in an accelerated completion of the FUSRAP program by the end of FY 2002.

^{***} Of the 47 sites, 2 sites are jointly funded by the Defense, and the Non-Defense appropriation accounts.

^{****} Of the 15 sites, 1 site is jointly funded by the Defense, and Non-Defense appropriation accounts, and 1 site is jointly funded by the Defense, Non-Defense, and the UE D&D accounts.

Release Site/Facilities





NOTE: Based on funding from the Defense, the Non-Defense, and the UE D&D accounts.

The term No Action, refers to release site/facilities that, after undergoing characterization/assessment, were determined to have no cleanup requirement and were approved by the appropriate regulatory agency as such.

PM-5 ENVIRONMENTAL RESTORATION - FY 1998 CONGRESSIONAL BUDGET REQUEST

Release site and facility completions broken out by state/territory, and percent complete forecasted through the end of FY 1998 are provided below:

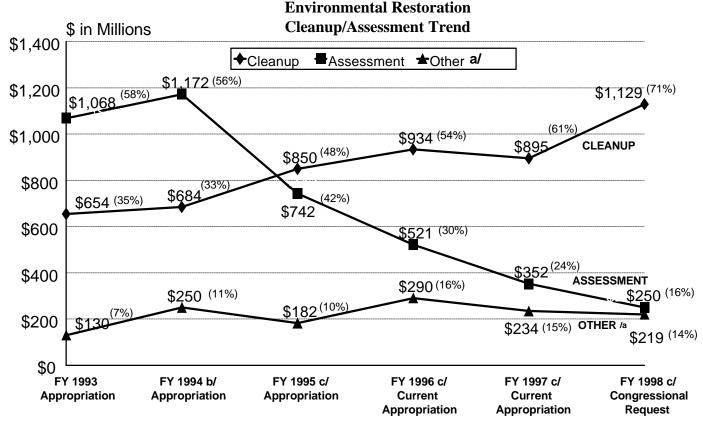
Forecasted Release Site/Facility Completions

State/Territory	Total (Release Sites/Facilities)	# Forecasted by End FY 1998	Percent Complete
Alaska	3	1	33.3%
Arizona	4	2	50%
California	441	281	63.7%
Colorado	219	101	46.1%
Connecticut	2	1	50%
Hawaii	3	3	100%
lowa	11	11	100%
Idaho	575	407	70.8%
Illinois	534	471	88.2%
Kentucky	159	14	8.8%
Massachusetts	3	3	100%
Maryland	1	0	0%
Michigan	1	1	100%
Mississippi	26	0	0%
Missouri	120	92	76.7%
Nebraska	1	1	100%
Nevada	2,373	465	19.6%

State/Territory	Total (Release Sites/Facilities)	# Forecasted by End FY 1998	Percent Complete
New Jersey	14	4	28.6%
New Mexico	2,382	1,989	83.5%
New York	81	16	19.8%
North Dakota	4	2	50%
Ohio	343	53	15.5%
Oregon	3	2	66.7%
Pennsylvania	4	3	75%
Puerto Rico	1	1	100%
South Carolina	374	59	15.8%
Tennessee	629	61	9.7%
Texas	241	239	99.2%
Utah	22	5	22.7%
Washington	1,338	63	4.7%
Wyoming	4	2	50%
TOTAL	9,916	4,354	43.9%

NOTE: Reflects funding from Defense, Non-Defense, UE D&D appropriation accounts.

All ER efforts are pursued with the goal of ensuring efficiency and maximizing the use of funds to achieve results. The ER program has demonstrated this by continuing to increase the amount of funds spent on cleanup activities and focusing on streamlining assessment and characterization activities.



a/ Other - consists of program management, uranium/thorium reimbursement, landlord, surveillance and maintenance, and program direction (from FY 1993-1996)

NOTE: Reflects total ER funding from Defense, Non-Defense, UE D&D appropriation accounts (except as noted in footnote b/ and c/).

b/ Excludes the Federal Contribution to the UE D&D appropriation account

c/ Budget levels presented for the ER program exclude Rocky Flats Waste Operations / Stabilization funds, and the Federal Contribution to the UE D&D appropriation account.

DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

(Dollars in Thousands)

ENVIRONMENTAL RESTORATION

PROGRAM FUNDING PROFILE

	FY 1996	FY 1997		FY 1997		
	Current	Original	FY 1997	Current	FY 1998	FY 1999
	Appropriation	Appropriation	Adjustments	Appropriation	Request	Request a/
Facilities and Sites						
Large Site Remedial Action	\$891,322	\$807,391	\$0	\$807,391	\$743,568	
Large Site Decommissioning	82,001	65,468	0	65,468	58,796	
Other Small Sites	99,642	74,370	0	74,370	88,302	
Rocky Flats Waste Management/Site Stabilization	0	432,340	0	432,340	465,100	
Federal Contribution to the UE D&D Account	350,000	376,648	0	376,648	388,000	
HQ Crosscutting Activities	33,305	5,977	0_	5,977	807	
Total, Defense Environmental Restoration	\$1,456,270	<u>\$1,762,194</u>	\$0	<u>\$1,762,194</u>	\$1,744,573	\$1,632,000

a/FY 1999 distribution by program may change based on the EM Ten-Year Plan.

DEPARTMENT OF ENERGY

FY 1998 CONGRESSIONAL BUDGET REQUEST

DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL RESTORATION

PROGRAM FUNDING BY SITE

Program Activity	FY 1996 Current Approp	FY 1997 Adjusted Approp	FY 1997 Adjustments	FY 1997 Current Approp	FY 1998 Request
ALBUQUERQUE OPERATIONS OFFICE					
Albuquerque Operations Office (NM)	\$10,241	\$6,114	\$0	\$6,114	\$4,716
Kansas City Plant (MO)	6,014	3,500	0	3,500	5,822
Los Alamos National Laboratory (NM)	57,920	46,805	0	46,805	66,579
Pantex Plant (TX)	13,025	9,075	0	9,075	9,641
Pinellas Plant (FL)	5,618	0	0	0	0
Grand Junction Projects Office (CO)	817	0	0	0	8,000
Sandia National Laboratory - CA	2,391	2,459	0	2,459	2,963
Sandia National Laboratory - NM	27,419	17,801	0	17,801	28,440
Subtotal, Albuquerque	\$123,445	\$85,754	\$0	\$85,754	\$126,161
CHICAGO OPERATIONS OFFICE					
Ames Laboratory (IA)	\$337	\$185	\$0	\$185	\$241
Argonne National Laboratory (East) (IL)	4,487	0	0	0	4,231
Argonne National Laboratory (West) (ID)	120	0	0	0	0
Brookhaven National Laboratory (NY)	204	0	0	0	0
Chicago Operations Office (IL)	4,124	896	0	896	231
Subtotal Chicago	\$9,272	\$1,081	\$0	\$1,081	\$4,703
IDAHO OPERATIONS OFFICE					
Idaho Operations Office (ID)	\$94,930	\$0	\$0	\$0	\$0
Idaho National Engineering Laboratory (ID)	2,160	107,416	0	107,416	84,088
Subtotal Idaho	\$97,090	\$107,416	\$0	\$107,416	\$84,088
NEVADA OPERATIONS OFFICE					
Nevada Operations Office (NV)	\$50,740	\$54,614	\$0	\$54,614	\$54,400
OAKLAND OPERATIONS OFFICE					
Santa Susana Field Laboratory (CA)	ERR	\$1,000	\$0	\$1,000	\$0
Lawrence Livermore National Laboratory (CA)	25,500	22,024	0	22,024	19,878
Oakland Operations Office (CA)	5,779	1,289	0	1,289	500
Subtotal, Oakland	ERR	\$24,313	\$0	\$24,313	\$20,378

PROGRAM FUNDING BY SITE; ENVIRONMENTAL RESTORATION -- DEFENSE (Continued)

Program Activity	FY 1996 Current Approp	FY 1997 Original Approp	FY 1997 Adjustments	FY 1997 Current Approp	FY 1998 Request
OAK RIDGE OPERATIONS OFFICE					
K-25 Site (TN)	\$13,163	\$8,359	\$0	\$8,359	\$8,673
Oak Ridge Associated Universities (TN)	41	0	0	0	0
Oak Ridge National Laboratory (TN)	29,389	15,830	0	15,830	16,023
Oak Ridge Operations Office (TN)	25,109	19,538	0	19,538	6,300
Oak Ridge Reservation (TN)	6,716	11,648	0	11,648	1,542
Y-12 Plant (TN)	24,803	23,192	0	23,192	31,614
Subtotal, Oak Ridge	\$99,221	\$78,567	\$0	\$78,567	\$64,152
OHIO FIELD OFFICE					
Battelle Columbus Laboratories (OH)	\$9,398	\$6,205	\$0	\$6,205	\$5,037
Fernald Environmental Management Project (OH)	256,526	261,273	0	261,273	225,400
Mound Plant (OH)	39,560	0	0	0	0
Ohio Field Office (OH)	14,619	2,880	0	2,880	0
Reactive Metals Inc. (OH)	9,414	16,000	0	16,000	15,000
Subtotal, Ohio	\$329,517	\$286,358	\$0	\$286,358	\$245,437
RICHLAND OPERATIONS OFFICE					
Richland Operations Office (WA)	\$157,243	\$134,149	\$0	\$134,149	\$132,302
ROCKY FLATS OFFICE					
Rocky Flats Plant (CO)	\$74,639	\$484,084	\$0	\$484,084	\$518,250
SAVANNAH RIVER OPERATIONS OFFICE					
Savannah River Operations Office (SC)	\$3,344	\$0	\$0	\$0	\$0
Savannah River Site (SC)	85,675	115,233	0	115,233	105,895
Subtotal, Savannah River	\$89,019	\$115,233	\$0	\$115,233	\$105,895
HEADQUARTERS					
Gov't Contribution to UE D&D Fund (TN)	\$350,000	\$376,648	\$0	\$376,648	\$388,000
Headquarters (DC)	41,305	13,977	0	13,977	807
Subtotal, Headquarters	\$391,305	\$390,625	\$0	\$390,625	\$388,807
TOTAL, ENVIRONMENTAL RESTORATION	<i>ERR</i>	\$1,762,194	\$0 _	\$1,762,194	\$1,744,573

DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

(Tabular dollars in thousands, narrative in whole dollars)

ENVIRONMENTAL RESTORATION

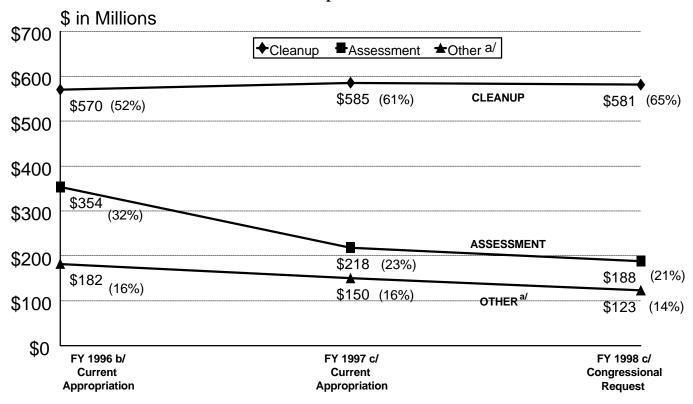
PROGRAM PERFORMANCE SUMMARY

The ER activities budgeted in the Defense Environmental Restoration and Waste Management appropriation account include remedial action activities, decommissioning efforts, surveillance and maintenance, landlord, compliance oversight activities, and a prudent amount of program management and technical support activities necessary to maintain the effective management of overall program efforts. Of the total 132 sites in 31 states and one territory under the responsibility of the ER program, 46 geographic sites are contaminated from past Defense-related activities. Three geographic sites are jointly funded by the Defense and the Non-Defense accounts, and are discussed in both budget presentations. One geographic site is funded by the Defense, Non-Defense and the UE D&D accounts. The 46 Defense-related geographic sites are included in three of the five ER Strategic Program Areas, with 35 in the Other Small Sites category and 11 in the Large Sites categories, with remedial action and decommissioning programs. Beginning in FY 1997, all funding for the Rocky Flats, Colorado site are requested in the ER program, including Waste Operations and Site Stabilization activities.

The following D-1 through D-3 tables provide specific "Defense" information relating to assessment versus cleanup funding, overall fiscal year funding, components of the "Defense" appropriation account, and geographic site completions.

All ER efforts are pursued with the goal of ensuring efficiency and maximizing the use of funds to achieve results. The ER program has demonstrated this by continuing to increase the amount of funds spent on cleanup activities and focusing on streamlining assessment and characterization activities.

Environmental Restoration "Defense" Cleanup/Assessment Trend



- a/ Other consists of program management, landlord, surveillance and maintenance, and program direction in FY 1996
- b/ Excludes the Federal Contribution to the UE D&D appropriation account
- c/ Budget levels presented for the ER program, exclude Rocky Flats Waste Operations / Stabilization funds, and the Federal Contribution to the UE D&D appropriation account

Components of the "Defense" Environmental Restoration Program

ER Defense Components	FY 1996 Current Appropriation	FY 1997 Current Appropriation	FY 1998 Congressional Request
Other Small Sites	\$ 99,642	\$74,370	\$88,302
Large Sites Remedial Action	891,322	807,391	743,568
Large Sites Decommissioning	82,001	65,468	58,796
Rocky Flats Waste Operations/Stabilization Efforts	0	432,340	465,100
Federal Contribution to the UE D&D Appropriation Account	350,000	376,648	388,000
Headquarters Crosscutting Work	33,305	5,977	807
Request	1,456,270	1,762,194	1,744,573
UE D&D Account Offset	-350,000	-376,648	-388,000
Total Work Scope Requested	\$1,106,270	\$1,385,546	\$1,356,573

Environmental Restoration FY 1998 Congressional Request Other Small Sites

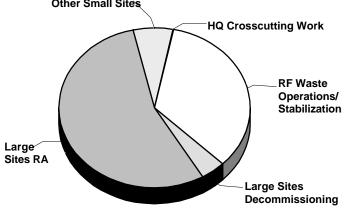
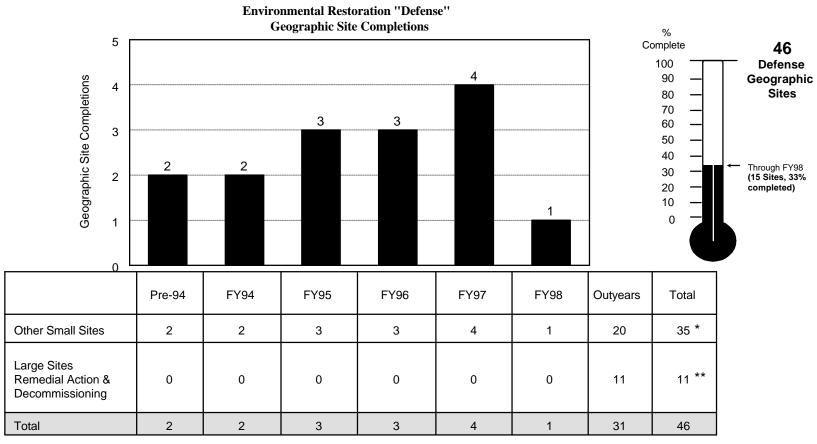


TABLE D-3 ENVIRONMENTAL RESTORATION DEFENSE - FY 1998 CONGRESSIONAL BUDGET REQUEST

In order to demonstrate annual progress, the chart below provides actual and planned geographic site completions. Large site completions will not be reached until after FY 2000. The ER program will have completed work at 33% of the Defense sites under its responsibility by the end of FY 1998.



^{*} Of the 35 sites, 2 sites are jointly funded by the Defense and the Non-Defense appropriation accounts.

^{**} Of the 11 sites, 1 site is jointly funded by the Defense and the Non-Defense appropriation accounts; and 1 site is jointly funded by the Defense, Non-Defense and the UE D&D accounts.

U.S. DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

ENVIRONMENTAL RESTORATION

ACRONYMS

AL	Albuquerque Operations Office	NTS	Nevada Test Site
ANL-E	Argonne National Laboratory - East	OU	Operable Unit
ARA	Auxiliary Reactor Area	ORAU	Oak Ridge Associated Universities
BCL	Battelle Columbus Laboratory	ORNL	Oak Ridge National Laboratory
CAMU	Corrective Action Management Unit	PRP	Potentially Responsible Party
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	PTU	Portable Treatment Unit
CFA	Central Facilities Area	RCRA	Resource Conservation & Recovery Act
CO	Consent Order	RD/RA	Remedial Design/Remedial Action
DOE	Department of Energy	RDWP	Remedial Design Work Plan
D&D	Decontamination and Dismantlement	RFI	RCRA Facility Investigation
ETEC	Energy Technology Engineering Center	RMI	Reactive Metals Incorporated
EM	Environmental Management	RMPE	Reduction of Mercury in Plant Effluents
ER	Environmental Restoration	ROD	Record of Decision
ERDF	Environmental Restoration Disposal Facility	S&M	Surveillance and Maintenance
FEMP	Fernald Environmental Management Project	SNL	Sandia National Laboratory
FFA	Federal Facility Agreement	SNL/CA	Sandia National Laboratory/California
GWTF	Ground Water Treatment Facility	SNL/NM	Sandia National Laboratory/New Mexico
HE/RAD	High Explosive/Radioactive	SRL	Savannah River Laboratory
INEL	Idaho National Engineering Laboratory	SRS	Savannah River Site
KCP	Kansas City Plant	SWMU	Solid Waste Management Unit
LANL	Los Alamos National Laboratory	TRU	Transuranic
LLNL	Lawrence Livermore National Laboratory	UE D&D	Uranium Enrichment Decontamination and
LLW	Low Level Waste		Decommissioning appropriation account
NAFR	Nellis Air Force Range	VVE	Vapor Vacuum Extraction
NEPA	National Environmental Policy Act	WAG	Waste Area Group

U.S. DEPARTMENT OF ENERGY FY 1998 CONGRESSIONAL BUDGET REQUEST DEFENSE ENVIRONMENTAL RESTORATION AND WASTE MANAGEMENT

ENVIRONMENTAL RESTORATION (Dollars in Thousands)

ALBUQUERQUE

I. <u>Mission Supporting Goals and Objectives</u>

The Environmental Restoration (ER) Program managed through the Albuquerque Operations Office (DOE-AL) supports activities at seven sites in five states. This includes the Kansas City Plant (KCP) in Missouri; the Pantex Plant in Texas; the Sandia National Laboratory (SNL) sites in California (SNL/CA) and New Mexico (SNL/NM); the Los Alamos National Laboratory (LANL) in New Mexico; the South Valley Superfund Site in New Mexico; and the Maxey Flats site in Kentucky. The Pinellas, Florida site is also included in this budget for FY 1996, and is in Environmental Management's (EM) Nuclear Materials and Facility Stabilization budget for FY 1997 and FY 1998. DOE-AL is also responsible for funding the Department's potentially responsible party (PRP) payment for cleanup of the contaminated Maxey Flats site in Kentucky.

The KCP is part of a 300-acre Federal complex located 12 miles south of downtown Kansas City, Missouri. In FY 1993, the Department shut down several facilities across the country and consolidated the production of non-nuclear components at the KCP Site. Major ER efforts at the KCP include the restoration of 42 potentially contaminated release sites. Through FY 1998, 36 release sites are forecast for completion, and remedial actions are in progress for the remaining sites.

The Pantex Plant is located near Amarillo, Texas, and has responsibility for ensuring the quality of the Nation's nuclear weapons stockpile, including dismantlement and maintenance. In FY 1994, the site was placed on the National Priorities List, thereby requiring remediation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) authority. Major ER activities at this site include the restoration of 239 release sites. Through FY 1998, 238 release sites are forecast for completion, and remedial actions are in progress for the remaining sites.

The SNL/CA facility is located adjacent to the Lawrence Livermore National Laboratory (LLNL) in California. The facility occupies an area of approximately 100 acres and is comprised of 21 release sites. Through FY 1998, 20 of these release sites are forecast for completion. Major ER activities include the cleanup of a 59,000 gallon diesel fuel oil spill from an underground transfer pipe.

The SNL/NM site located in Albuquerque, New Mexico, is a research and development facility with a primary mission of developing, engineering, and testing non-nuclear components of nuclear weapons. Major ER efforts involve the remediation of inactive waste disposal and release sites at Albuquerque, and a number of other remote locations. A total of 240 release sites and one facility have been identified for further assessment and possible remediation. These sites have known or suspected releases of hazardous, radioactive, or mixed waste. Through FY 1998, a total of 209 release sites are forecast for completion.

Mission Supporting Goals and Objectives (Continued)

The LANL encompasses over 43 square miles in northern New Mexico. LANL conducts major programs in multiple areas, including applied research in nuclear and conventional weapons development, nuclear fission and fusion, nuclear safeguards and security, and environmental and energy research. The ER LANL budget supports a variety of activities related to approximately 2,107 potential release sites and 13 facilities. Through FY 1998, 1,754 release sites and nine facilities are forecast for completion.

The Department of Energy (DOE) is one of several parties responsible for cleanup of the South Valley Superfund Site located in Albuquerque, New Mexico. The DOE provides funding support for cleanup efforts related to the South Valley Site, which was owned by the Atomic Energy Commission and operated by the American Car Foundry Company from 1951 to 1967. DOE is a PRP under a Tri-Party Agreement with the U.S. Air Force and General Electric. South Valley is considered one release site, for which construction of a ground water treatment systems was completed in FY 1996 and operation is ongoing.

Pinellas is a 100-acre site located six miles north of St. Petersburg, Florida. The site's former mission was component fabrication for DOE's nuclear weapons program. Cleanup is proceeding at the site to prepare it for alternative uses by the surrounding community. DOE's goal is to conclude its operations at the Pinellas Plant by the end of FY 1997, although ER for remediation of contaminated ground water and associated waste management activities will continue for a number of years.

The Maxey Flats site in Kentucky is a site where DOE is responsible for contributing a PRP payment for the cleanup of the site. Maxey Flats is considered one release site.

The DOE-AL manages, coordinates, tracks, and assists in the implementation of the ER program at Pantex, Pinellas, Kansas City, both Sandia Laboratory locations, and LANL. Agreements-in-Principle (AIPs) with the States of Texas and Missouri are also managed and implemented by the DOE-AL, as well as DOE's payment for cleanup of the Maxey Flats, Kentucky site. Legal drivers at Albuquerque include the Resource Conservation and Recovery Act (RCRA), CERCLA, National Environmental Policy Act (NEPA), State laws and codes, and DOE Orders.

Funding Schedule

Program Activity	I	FY 1996	F	Y 1997	I	FY 1998	\$ Change	% Change
Large Site Remedial Action	\$	60,419	\$	48,719	\$	65,982	\$ 17,263	35
Large Site Decommissioning		6,642		3,821		4,617	796	21
Other Small Sites		56,384		33,214		55,562	 22,348	67
Total, Albuquerque II. Performance Summary	\$	123,445	\$	85,754	\$	126,161	\$ 40,407	47

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Carry out assessments at LANL including site investigations, Corrective Measures Studies, RCRA Facilit Investigation (RFI) fieldwork, and preparation of RFI reports. In FY 1996, efforts were completed at 39 sites. In FY 1997, activities will be completed at 30 sites. In FY 1998, activities will be completed at 40 sites. 	ty \$ 9,100	\$ 8,200	\$ 10,370
 Complete interim actions at LANL. In FY 1996, actions were completed at 16 sites. In FY 1997, interim actions will be completed at eight sites. In FY 1998, interim actions will be completed at ten sites. 	2,500	2,000	2,000
 Conduct site remedial actions at LANL. In FY 1996, remediation was completed at 58 sites. In FY 1997, remediation will be completed at 45 sites. In FY 1998, remediation will be completed at 70 sites. 	28,320	22,379	39,483
 Provide for program management and technical support activities at LANL. 	11,358	10,405	10,109
Provide for site-wide crosscutting, program management, and technical support activities.	928	5,735	4,020
 Provide for program direction for Albuquerque Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office Environmental Management. 	8,213	0	0
Total Large Site Remedial Action, Albuquerque	60,419	48,719	65,982

remediation alternative (bioremediation will continue for several years).

Large Site Decommissioning:	<u>FY 1996</u>	FY 1997	FY 1998
 Conduct decommissioning actions at LANL. In FY 1996, decommissioning was completed at 22 structures. In FY 1997, decommissioning will be completed at ten structures. In FY 1998, decommissioning will be completed at four structures. 	\$ 6,642	\$ 3,821	\$ 4,617
Total Large Site Decommissioning, Albuquerque	6,642	3,821	4,617
Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct efforts at the Chemical Waste Landfill at SNL/NM. In FY 1996, interim measures using the vapor extraction technique were initiated. In FY 1997, interim measures at the Chemical Waste Landfill will continue. In FY 1998, interim measures will continue and excavation at a separate location will begin. 	1,632	1,217	4,900
 Carry out Voluntary Corrective Measures/No Further Action determinations at both SNL sites. In FY 1996, four interim measures and 29 remedial actions were initiated and completed. In FY 1997, 22 remedial actions will be initiated and completed. In FY 1998, 29 remedial actions will be initiated and completed. 	4,679	2,521	7,801
 Provide for treatment, storage and disposal of ER-generated wastes at SNL/NM. In FY 1996, design work for the Temporary Unit/Corrective Action Management Unit (CAMU) was carried out. In FY 1997, Temporary Unit will be constructed and operations will begin and the permit for CAMU submitted. In FY 1998, construction will be completed and operations will begin at CAMU. 	2,272	2,418	5,109
 Carry out bioremediation of the Fuel Oil Spill at SNL/CA. In FY 1996, pilot scale bioremediation activities were conducted. In FY 1997, pilot scale bioremediation activities will continue. In FY 1998, full scale bioremediation activities will be initiated which completes the planned 	1,447	1,430	1,975

Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	
 Provide for site compliance and miscellaneous project activities (includes ground water monitoring, No Further Action submittals, RFI/Corrective Measures Study activities, septic tank sampling) at both SNL sites. 	\$ 7,185	\$ 3,027	\$ 3,231	
 Conduct assessment and characterization efforts at SNL/NM. In FY 1996, assessment of the mixed waste landfill and of site-wide hydrogeology was completed. 	2,376	0	0	
 Conduct assessment activities at the 95th Terrace and multi-site corrective measures study at KCP. In FY 1996, characterization efforts were carried out at 95th Terrace and the Remediation Technology Evaluation was completed, for the multi-site corrective measurers study. In FY 1997, the administrative closure will be completed. 	132	19	0	
 Carry out Technology Demonstration Projects at KCP. In FY 1996, the Deep Soil Mixing Demonstration Project was completed and the Microwave Technology Demonstration Project initiated. In FY 1997, the Funnel and Gate Iron Filing project will be initiated and the Microwave Technology Demonstration projects completed. In FY 1998, the Funnel and Gate Iron Filing project will be completed. 	1,341	260	160	
 Provide for Solid Waste Management Unit (SWMU) remediation activities at KCP. In FY 1996, five SWMUs in the Trichloroethylene Still Area, one in the Maintenance Vehicle Repair Shop Sump Site, all in the Plating Building area, all in the Miscellaneous Polychlorinated Biphenyl sites area, the Department 26 Inside, and all in the Department 27 Inside were completed. In FY 1997, four SWMUs in the Outfall 001/Northeast Area will be completed, and remediation of four SWMUs in the Trichloroethylene Still Area and the Maintenance Vehicle Repair Shop Sump Site will be initiated. In FY 1998, one SWMU at the Trichloroethylene Still Area will be completed and remediation of the remaining SWMU at the Maintenance Vehicle Repair Shop Sump Site will be initiated. 	2,803	2,321	3,800	
• Provide for ground water treatment and monitoring at KCP.	950	900	910	
• Install six monitoring wells at the Department 26 Inside Area at KCP.	0	0	107	

Other Small Sites:	FY 1996	FY 1997	FY 1998
 Perform assessment activities at the High Explosive/Radioactive (HE/RAD) Sites, Firing Sites, Supplemental Sites, Ditches and Playas, and the Landfill Sites at Pantex. In FY 1996, four RFI reports and treatability studies for the Zone 12 Ground Water Project were completed, and assessments of the Landfill Sites continued. In FY 1997, assessments of the Landfill Sites and the HE/RAD Sites will be completed. In FY 1998, risk assessments for ground water closure will be completed. 	\$ 500	\$ 150	\$ 327
 Conduct remediation efforts at Miscellaneous Spill Sites at the Pantex Plant. In FY 1996, four hot spot removals were completed. In FY 1997, remediation activities will continue. In FY 1998, remediation activities will continue. 	190	220	135
 Carry out remediation activities at the Ditches and Playas, the HE/RAD Sites, and the Firing Sites at the Pantex Plant. In FY 1996, eight SWMUs and two interim cleanups in the Ditches and Playas area were completed; one SWMU in the HE/RAD Site was completed and the equalization tank removed. More release sites than originally planned were remediated in FY 1996. In FY 1997, remediation activities at the Firing Sites will be initiated, and remediation activities at the Ditches and Playas and HE/RAD Sites will continue. In FY 1998, remediation at all three SWMUs will be completed. 	5,154	413	441
 Conduct remediation of the Landfill Sites at the Pantex Plant. In FY 1996, remediation activities were deferred to FY 1997. In FY 1997, remediation efforts will be initiated. In FY 1998, remediation efforts will continue. 	0	1,430	1,451
 Carry out Zone 12 Ground Water Protection and Remediation efforts at the Pantex Plant. In FY 1996, remediation activities were conducted. In FY 1997, remediation activities will continue. In FY 1998, remediation activities will continue. 	5,500	4,499	2,549
 Construct a facility for treatment, storage and disposal of material at the Pantex Plant. 	0	0	437

Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
• Complete data collection , operation and monitoring reports for the Ditches and Playas and the HE/RAD Sites under the Long-Term Surveillance and Maintenance Program at the Pantex Plant.	\$ 0	\$ 0	\$ 192
 Continued remediation at the four and one-half acre site at Pinellas; continued remediation and assessment of the Miscellaneous Sites; made required PRP contribution; initiated cleanup of the radioactive and hazardous materials area; initiated/continued building waste neutralization assessment; and continued interim measures for the West Fenceline. Responsibility for the Pinellas site was transferred to EM's office of Nuclear Materials and Facility Stabilization in FY 1997. 	5,618	0	0
 Continue ground water remediation at South Valley. In FY 1996, ground water remediation construction was completed and operation started. In FY 1997, ground water remediation operation activities will continue. In FY 1998, ground water remediation operation activities will continue. 	1,100	379	696
 Provide for a variety of crosscutting EM support activities. Headquarters-managed crosscutting requirements vary from year to year and site to site, and are determined during year of execution. 	817	0	0
Provide program management and technical support activities at SNL/NM, SNL/CA, KCP, and Pantex.	12,688	12,010	13,341
 Provide funding for partial PRP payment of DOE's share of the cleanup at the Maxey Flats site in Kentucky in FY 1998. Responsibility for this activity was funded under the Defense Headquarters account for FY 1996 and FY 1997. 	0	0	8,000
Total Other Small Sites, Albuquerque	56,384	33,214	55,562
TOTAL, ALBUQUERQUE	. \$ 123,445	\$ 85,754	\$ 126,161

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Remedial Action:

 Increased work scope at LANL (40 vs. 30 site assessments) requires increased funding. In addition, the remaining sites to be assessed after FY 1997 tend to be more complex, such as those requiring the RCRA Corrective Measures Process. 	\$ 2,170
 Increased work scope at LANL (70 vs. 45 complete site remedial actions) requires increased funding and sites to be remediated in FY 1998 are more complex. 	17,104
 Reduction in LANL technical support and program management costs. 	-2,011
Subtotal	17,263
Large Site Decommissioning:	
 Increased funding is required due to the complexity of LANL facilities to be decommissioned in FY 1998. 	796
Subtotal	796
Other Small Sites:	
 At SNL/NM increased funding fully supports implementation of the Environmental Management Small Sites Strategy; assessment activities may lead to No Further Action determinations and a number of voluntary corrective measures to remediate SWMUs leading to a site completion in approximately FY 2001. Additional funding in FY 1998 allows more complex cleanup to be undertaken, involving significant removals of contaminated materials (e.g., chemical waste Landfill). Also, treatment, storage, and disposal of ER-contaminated wastes will be managed by construction of the CAMU facility beginning in FY 1998. 	14,348
 Increase due to transfer of responsibility for Maxey Flats PRP payment. 	8,000
Subtotal	22,348
Total Funding Change, Albuquerque	\$ 40,407

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

CHICAGO

I. <u>Mission Supporting Goals and Objectives</u>

The ER program managed through the Chicago Operations Office supports activities at three sites in two states. These sites include the Ames Laboratory in Iowa; and the Site A and Argonne National Laboratory - East (ANL-E) sites in Illinois.

The Ames Laboratory is comprised of 11 release sites; Site A has 11 release sites; and the Argonne National Laboratory-East has 432 release sites, and 87 facilities. Through FY 1998, the Ames Laboratory and Site A are forecast to complete remediation at all their release sites and at ANL-E, remediation will be completed at approximately 85% of the release sites and facilities.

The primary mission of the facilities under the Chicago Operations Office is research, development, and demonstration for DOE Energy Research and Nuclear Energy programs. This includes support of the nation's advanced reactor program and research on the fundamental properties of matter; physical, life, environmental sciences; magnetic confinement fusion and high-energy physics. By-products of this mission include transuranic (TRU) waste, low-level waste, hazardous waste, and mixed waste (radioactive and hazardous combined). The Chicago Operations Office's facilities are aging, and many include former waste disposal sites that need to be assessed according to today's standards to determine the extent of environmental contamination and the need for remediation.

The Chicago Operations Office manages, coordinates, tracks, and assists in the implementation of the ER program among the various sites. Major legal drivers include RCRA and state laws.

II. <u>Funding Schedule</u>

Program Activity	F	Y 1996	F	Y 1997	F	Y 1998	\$ 0	Change	% Change
Large Site Remedial Action	\$	2,763	\$	0	\$	0	\$	0	0
Other Small Sites		6,509		1,081		4,703		3,622	335
Total, Chicago	\$	9,272	\$	1,081	\$	4,703	\$	3,622	335

III. Performance Summary

La	rge Site Remedial Action:	<u>FY 1990</u>	FY 1997	<u>FY 1998</u>
•	Provided drinking water hookups at Brookhaven National Laboratory.	\$ 204	\$ 0	\$ 0
•	 Provided for program direction expenses of Federal staff at Chicago and associated field sites supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	2,559	0	0
	Total Large Site Remedial Action, Chicago	2,763	0	0
<u>Ot</u> l	ner Small Sites:	<u>FY 1990</u>	6 FY 1997	<u>FY 1998</u>
•	 Provide for characterization/remediation and program management at the Chemical Disposal Site at Ames. In FY 1996, characterization efforts to assess risk and comply with state regulations were carried out. In FY 1997, characterization and remediation efforts will be completed and surveillance and maintenance (S&M) will be initiated (No-Action Remedy). In FY 1998, program management, S&M and monitoring will continue. 	297	185	241
•	 Conduct remediation of Site A. In FY 1996, remediation was initiated of Site A, to reduce risk and return of the site to the private owner. In FY 1997, remediation of Site A will be completed and the site returned to the private owner. In FY 1998, S&M will be provided. 	985	5 170	231
•	Provided for EM support activities that are funded through Chicago, which are managed by Headquarters. - Headquarters-managed crosscutting requirements vary from year to year and site to site, and are determined during year of execution.	2,738	3 0	0
•	Provide for State oversight expenses; provide oversight, monitoring, and technical support for all Chicago sites. State oversight expenses in FY 1998 are funded in the non-defense appropriation.	\$ 664	\$ 726	\$ 0

Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct remediation activities at ANL-E. In FY 1996, continued decontamination and dismantlement (D&D) of the CP-5 Reactor to reduce risk at ANL-E. In FY 1997, funding January 17, 1997 for ANL-E activities will not be provided in the Defense appropriation. In FY 1998, complete removal of the 317-Area French Drain; extension of the 800-Area Landfill Cap, and begin final remediation of the solid Waste Disposal and Hazardous Waste Disposal Areas to reduce risk at ANL-E. 	1,825	0	4,231
Total Other Small Sites, Chicago	6,509	1,081	4,703
TOTAL, CHICAGO	\$ 9,272	\$ 1,081	\$ 4,703
Explanation of Funding Changes FY 1997 to FY 1998:			
Other Small Sites:			
 Funding for ANL-E was not appropriated in the Defense account for FY 1997. Defense funding is require remediation of ANL-E in FY 1998. 	d to continue	\$	4,231
 No oversight funding is provided for FY 1998. 			-726
• Ames and Site A will be S&M only in FY 1998.			117
Total Funding Change, Chicago	• • • • • • • • • • • • • • • • • • • •	\$	3,622

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

IDAHO

I. <u>Mission Supporting Goals and Objectives</u>

The ER Program managed through the Idaho Operations Office supports remediation activities at the Idaho National Engineering Laboratory (INEL) site. The INEL is located in southeastern Idaho along the western edge of the Eastern Snake River Plain and encompasses a semi-arid area of approximately 890 square miles. The Laboratory is a multipurpose DOE national laboratory providing primarily engineering expertise and operations/development support in the areas of spent nuclear fuel, waste management, environmental assessment and remediation, D&D of surplus facilities, alternative energy source development and technology transfer to Government and private industry. The ER budget supports a variety of legally-driven remediation activities at 98 different operable units (OUs), which are comprised of 154 facilities and 381 release sites. Through FY 1998, 108 facilities and 265 release sites are forecast for completion.

The 98 OUs at the INEL have been grouped into ten Waste Area Groups (WAGs) and include: (1) Test Area North (TAN), which consists of facilities for the handling, storage examination and research of spent nuclear fuel; (2) Test Reactor Area which houses extensive facilities for studying the effects of radiation of materials, fuels and equipment; (3) Idaho Chemical Processing Plant which houses reprocessing facilities for Government-owned defense and research spent fuels; (4) Central Facilities Area (CFA) which contains many of the services for the entire site, including environmental laboratories, medical, etc.; (5) Power Burst Facility/Auxiliary Reactor Area (ARA) which served, for years, as the testing ground for nuclear fuels that power the nation's commercial nuclear reactors and is currently on standby status; (6) Experimental Breeder Reactor (EBR-I), which was the first reactor in the world to generate useable amounts of electricity; (7) Radioactive Waste Management Complex which is a controlled area established for the disposal of solid radioactive wastes generated in INEL operations. The Radioactive Waste Management Complex includes the Pit 9 project which is aggressively investigating the use of commercially available remediation technology for application to buried TRU waste which was shipped from Rocky Flats; (8) Naval Reactors Facility which researched and developed prototype reactors for both submarines and surface ships (9) Argonne National Laboratory - West (managed through the Chicago Operations Office) which serves as the nation's testing ground for breeder-reactor technology; and (10) miscellaneous surface sites and liquid disposal areas throughout the INEL that are not included in the other WAGs.

Potential release sites addressed under the ten WAGs include tanks, spills, disposal sites, wastewater disposal systems, leach pits, trenches, rubble piles, ponds, cooling towers, wells, landfills, storage areas, etc. Legal drivers at this site are: 1989 listing on the National Priorities List; a 1991 Federal Facility Agreement (FFA)/Consent Agreement; and the Governor's settlement agreement of 10/95.

II. Funding Schedule

Program Activity	F	FY 1996		FY 1997	F	Y 1998	\$ Change		% Change
Large Site Remedial Action	\$	92,788	\$	102,506	\$	77,971	\$	-24,535	-24
Large Site Decommissioning		4,302		4,910		6,117		1,207	25
Total, Idaho	\$	97,090	\$	107,416	\$	84,088	\$	-23,328	-22

III. Performance Summary

Lai	ge Site Remedial Action:	;	FY 1996	<u>F</u>	Y 1997	<u>F</u>	<u>Y 1998</u>
•	 Provided for program direction expenses for Idaho Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	\$	2,000	\$	0	\$	0
•	Provide compliance required program management, including configuration management, data management, sample management, administrative record maintenance, quality and compliance assurance, systems planning control, community relations, and waste streams tracking.		14,088		13,799		9,464
•	Provided for various EM crosscutting efforts which are Headquarters managed activities. - Headquarters-managed crosscutting requirements vary from year to year and site to site, and are determined during year of execution.		159		0		0
•	Provide funding for the FFA/CO (Consent Order) Grant with the State of Idaho; provide for technical support (i.e., technical data development by the United States Geological Services and University Foundation; and technical support contractors supporting technical/programmatic and program management functions).		1,462		3,610		3,610

La	rge Site Remedial Action:]	FY 1996	<u>F</u>	Y 1997	<u>F</u>	Y 1998
•	 Conduct WAG 1 Activities. In FY 1996, activities included: resumption of Ground Water Treatment Facility (GWTF) operation using a new re-injection well, treating over one million gallons of water, negotiating with regulatory agencies to achieve a more cost-effective approach to ground water treatability studies and ground water pumping strategy; sampling mixed-waste underground storage tank (V-Tank) contents for treatability studies; and Work Plan submittal and implementation for the WAG 1 Comprehensive RI/FS. In FY 1997, activities will include: continuing GWTF operation, and completing design of new GWTF; completing V-Tank treatability study; submittal of Draft WAG 1 Comprehensive RI/FS and Baseline Risk Assessment reports to regulatory agencies; and completion of the Proposed Plan for WAG 1 Comprehensive RI/FS. In FY 1998, activities will include: continuing GWTF operation and initiating construction of the new GWTF; and completion of the WAG 1 Comprehensive RI/FS Record of Decision (ROD) with initiation of remedial action planning activities. 	\$	6,594	\$	6,438	\$	4,204
•	 Provide for WAG 2 Activities. In FY 1996, activities included: operation and monitoring of the Warm Water Waste Pond IA and perched water remedial action, and submittal of the Draft WAG 2 Comprehensive RI/FS and Baseline Risk Assessment reports to the regulatory agencies. In FY 1997, activities will include: continued operation and monitoring of the Warm Water Waste Pond and perched water, and completion of the WAG 2 Comprehensive RI/FS report, Proposed Plan and Draft ROD. In FY 1998, activities will include WAG 2 Comprehensive RI/FS remedial action planning and design activities. 		1,077		1,214		348
•	 Conduct WAG 3 Activities. In FY 1996, activities included: implementation of the WAG 3 Comprehensive RI/FS, which included summarization of field investigation results; and submittal of the Draft WAG 3 Comprehensive RI/FS report to the regulators for review and comment. In FY 1997, the Final WAG 3 Comprehensive RI/FS report, the Baseline Risk Assessment report, and the Draft Proposed Plan will be completed. In FY 1998, the Final Proposed Plan, completion of the WAG 3 Draft Final Comprehensive RI/FS ROD, and initiation of remedial action planning and design will be completed. 		1,221		892		1,919

III. Performance Summary (Continued)

02 removal action.

Large Site Remedial Action:]	FY 1996	<u>I</u>	FY 1997	<u>F'</u>	Y 1998
 Provide for WAG 4 Activities. In FY 1996, activities included: completed soil treatment for the FY 1995 CFA Calcine Pit Removal Action; initiated the French Drains Removal Action of heavy metal and radionuclide-contaminated soil; completed the lead contaminated soil removal action in OUs 4-06 and 09; initiated the petroleum contaminated soil removal action in OUs 4-06 and 09; completed the Track 2 decision documents on OUs 4-06 and 08; completed the Final ROD and Remedial Design/Remedial Action (RD/RA) Work Plan for CFA Landfills I, II, and III; initiated soil cover installation remediation for CFA Landfills I, II, and III; and completed the Draft WAG 4 Comprehensive RI/FS Scope of Work. In FY 1997, activities will include: completion of the Landfills I, II, and III soil caps; completion of the WAG 4 Comprehensive RI/FS Work Plan and field implementation; completion of the WAG 4 Comprehensive RI/FS report; completion of the lead contaminated soil removal action at OUs 4-06 and 09; and completion of the French Drains removal action. In FY 1998, activities will include: completion of the Draft WAG 4 Comprehensive RI/FS ROD and initiation of RD/RA planning activities. 	\$	4,217	\$	2,216	\$	836
 Carry out WAG 5 Activities. In FY 1996, activities included: completion of the Final ROD for the SL-1 and BORAX-1 burial grounds; excavation and contaminated soil consolidation at SL-1 and BORAX-1; initiation of the riprap cap for SL-1 and BORAX-1; initiation of ARA-02 removal action to remove septic tank mixed waste contents; and completion of WAG 5 Comprehensive RI/FS Draft Scope of Work. 		2,652		4,118		845

In FY 1997, activities will include: completion of the SL-1/BORAX-1 burial ground caps; completion of the WAG 5 Comprehensive RI/FS Work Plan and field implementation; and completion of the ARA-

In FY 1998, activities will include: completion of the WAG 5 Comprehensive RI/FS ROD.

rge Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Provide for WAG 7 Activities. In FY 1996, activities included: initiation of the Vapor Vacuum Extraction (VVE) Phase I remedial action which removed 15,500 lbs. of volatile organic compounds from the vadose zone; completion of the TRU Pits and Trenches RI/FS field work; and completion of 80 percent of the Pit 9 treatment building construction, 40 percent of the retrieval building construction, and 80 percent of the administration area and off-site construction. In FY 1997, activities will include: completion of the VVE Phase I remedial action report and continuation of VVE remedial action; completion of the TRU Pits and Trenches RI/FS and RI/Baseline Risk Assessment report; and completion of the Pit 9 RD/RA Work Plan; completion of the treatment building, retrieval building, administration area and off-site construction; and initiation of Pit 9 overburden removal. In FY 1998, activities will include: continuation of the VVE Remedial Action; completion of the TRU Pits and Trenches ROD; and initiation of the Pit 9 Limited Production Test. 	\$ 55,193	\$ 64,396	\$ 56,332
 Conduct WAG 10 Activities. In FY 1996, activities included: completion of the 22-acre Naval Ordnance Disposal Area removal action; continuation of area wide ordnance removal action; completion of Rad Contaminated Soils removal action; cost saving consolidation of the Rad Contaminated Soils RI/FS into the WAG 10 Comprehensive RI/FS; and preliminary scoping discussions with regulatory agencies for the WAG 10 Comprehensive RI/FS. In FY 1997, activities will include: continuation of critical ordnance area removal actions; completion of the ordnance area Track 2 assessment; and completion of WAG 10 Comprehensive RI/FS Scope of Work, Work Plan, and field work. In FY 1998, activities will include: completion of the Draft Ordnance IA Proposed Plan and WAG 10 Comprehensive RI/FS ROD. 	4,125	5,823	413
Total Large Site Remedial Action, Idaho	92,788	102,506	77,971

Large Site Decommissioning:		FY 1996]	FY 1997	<u>I</u>	FY 1998
 Perform D&D activities at various ARA sites. In FY 1996, efforts included: treatment and solidification of Army Re-entry Vehicle Facility Site Nak; initiation of D&D planning activities for ARA I; continuation of D&D at ARA II; continuation of D&D at ARA III; completion of D&D at BORAX V; initiation of D&D planning activities for the TAN-Technical Support Facility; and initiation of D&D of Chemical Processing Plant 631, 709, 734. In FY 1997, efforts will include: completion of demolition of the Army Re-entry Vehicle Facility Site Nak bunker and disposal of the Nak residue as low-level waste (LLW) at the Radioactive Waste Management Complex; initiation and completion of ARA I D&D field work and Final Report; completion of D&D and the Final Report for ARA II; completion of D&D at ARA III; completion of the D&D Final Report for BORAX V; initiation of D&D of the TAN-Technical Support Facility; and completion of D&D and the Final Report for Chemical Processing Plant 631, 709, 734. In FY 1998, efforts will include; completion of the D&D Final Report for ARA III; initiation of D&D planning activities for Loss Of Fluid Test; continuation of D&D at the TAN-Technical Support Facility; and initiation of D&D planning activities for Chemical Processing Plant 601. 	\$	4,302	\$	4,910	\$	6,117
Total Large Site Decommissioning, Idaho	_	4,302	_	4,910	_	6,117
TOTAL, IDAHO	\$	97,090	\$	107,416	\$	84,088

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Remedial Action:

 Major construction activities for Pit 9 and the major assessment activity for the Radioactive Waste Management Complex will be completed in FY 1997. 	\$ -8,064
 Major ordnance cleanup and major assessment activity at WAG 10 will be completed in FY 1997. 	-5,410
 Major remedial action at WAG 5 (SL-1 Burial Ground) will be completed in FY 1997. 	-3,273
 Landfill caps at WAG 4 will be completed in FY 1997. 	-1,380
 WAG 1 (TAN) GWTF construction will be initiated in FY 1998, but design efforts completed in FY 1997. Also, major comprehensive RI/FS work will be completed in FY 1997. 	-2,234
 Reduced program management costs in FY 1998. 	 -4,174
Subtotal	-24,535
Large Site Decommissioning:	
 Perform additional mortgage reduction D&D in FY 1998. 	1,207
Subtotal	 1,207
Total Funding Change, Idaho	\$ -23,328

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

NEVADA

I. <u>Mission Supporting Goals and Objectives</u>

The ER program managed through the Nevada Operations Office supports activities at various sites in five states. These sites include the Nevada Test Site (NTS), DOE release sites on the Nellis Air Force Range (NAFR), the Project Shoal Area, the Central Nevada Test Area, the Tonopah Test Range (Nevada), and "Off-site" test area locations in Colorado (Rulison and Rio Blanco), Mississippi (Salmon Site), New Mexico (Gasbuggy and Gnome-Coach), and Alaska (Amchitka Island). The NTS is located about 65 miles northwest of the City of Las Vegas and encompasses 1,350 square miles of desert and mountainous terrain and is surrounded on three sites by the NAFR. The United States conducted 1,054 above and below-ground nuclear tests of which 928 occurred at the NTS.

The remaining 126 nuclear tests were conducted at other sites in and outside of Nevada. Since the 1992 weapons testing moratorium, the focus has now shifted to remediation of inactive sites and facilities that were contaminated during earlier testing activities. The Project Shoal Area (in 1963) and the Central Nevada Test Area (in 1968) were each the site of one underground nuclear test. The Tonopah Test Range was established in 1957 for ballistics testing of nuclear weapons, parachute delivery systems, and other non-nuclear functions for Sandia National Laboratories. Ground water at off-site nuclear test and experiment locations in Colorado, Mississippi, Nevada, Alaska, and New Mexico is monitored to ensure no migration of radionuclides occurs at these sites.

Beginning in FY 1997, a FFA/CO between the Nevada Division of Environmental Protection (State), Nevada Operations Office and the Defense Special Weapons Agency (which has release sites on the NTS) will govern ER activities on the NTS, Tonopah Test Range, DOE sites on the NAFR, and the two off-site test areas in Nevada -- Shoal and Central Nevada Test Area. Alaska and Mississippi guide monitoring and restoration activities at sites in those states. Other legal drivers governing remedial action at Nevada Operations Office sites include RCRA, CERCLA, the Atomic Energy Act, and applicable state laws. The Nevada Operation Office is comprised of 2,396 release sites and ten facilities. Through FY 1998, 464 release sites and three facilities are forecast for completion.

II. Funding Schedule

Program Activity	F	FY 1996		FY 1997		Y 1998 \$ Change		FY 1998		Change	% Change	
Large Site Remedial Action	\$	43,963	\$	45,694	\$	43,417	\$	-2,277	-5			
Large Site Decommissioning		381		50		2,983		2,933	5,866			
Other Small Sites												
Amchitka Island, AK		53		2,710		20		-2,690	-99			
Rio Blanco, CO		66		69		403		334	484			
Rulison, CO		1,612		175		104		-71	-41			
Salmon Site, MS		2,131		1,569		3,076		1,507	96			
Gasbuggy, NM		83		789		121		-668	-85			
Gnome-Coach, NM		171		358		225		-133	-37			
Shoal Site, NV		2,036		659		1,351		692	105			
Central Nevada Test Area, NV		244		2,541		2,700		159	6			
Total Other Small Sites		6,396		8,870		8,000		-870	-10			
Total, Nevada	\$	50,740	\$	54,614	\$	54,400	\$	-214	<1			

III. Performance Summary

La	rge Site Remedial Action:	1	FY 1996	<u>F</u>	Y 1997	<u>FY</u>	<u> 1998</u>
•	Completed FFA negotiations for DOE facilities/sites in the State of Nevada.	\$	1,694	\$	0	\$	0
•	 Provided for program direction expenses for Nevada Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 		2,765		0		0
•	 Provide for program management activities (Program Integration and Agreements). In FY 1996, provided program management for FFA management, program and project management, and completion of the Environmental Impact Statement. In FY 1997, provide program management support for FFA/CO Management, program and project management, and AIPs with States of Nevada, Alaska, and Mississippi. In FY 1998, provide program management support for FFA/CO Management, program and project management, and AIPs with States of Nevada, Alaska, and Mississippi. 		6,143		7,933	,	7,883
•	 Carry out Underground Test Area remediation activities. In FY 1996, drilling continued for near-field wells (four) to acquire data for model; completed model and design, and began implementing monitoring networks based on results of the model; increased geologic coring, and accelerated ground water modeling, risk assessments, and database management system development and implementation of monitoring network; and completed regional ground water model and risk assessment. In FY 1997, drilling efforts will continue for near-field wells for implementing monitoring networks for ground water impacted by past underground nuclear testing. In FY 1998, site-specific data acquisition activities will be carried out. 		22,080		16,025	1	6,683
•	 Conduct industrial site remedial actions on the NTS and Tonopah Test Range. In FY 1996, removed nine underground storage tanks; completed closure of one RCRA site; and characterized three sites. In FY 1997, two RCRA sites will be closed; and characterization efforts will be conducted at four additional sites. In FY 1998, remediation of the Area 6 Decontamination Pond; remedial activities at two septic tank/sewage lagoon; and assessments at three other RCRA industrial sites will be completed. 		5,554		7,456	1	1,371

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct activities at Contaminated Soil Sites on the Tonopah Test Range, NAFR, and NTS. In FY 1996, the interim soil removal action was completed at Double Tracks Site. In FY 1997, cleanups of the Clean Slate plutonium soil contamination sites will be initiated; work on hydrodynamic test sites will begin; and revegetation of Double Tracks plutonium spill site will be performed. In FY 1998, the following will be completed: closure documentation for Double Tracks; the corrective action decision documentation for Clean Slates; developing the corrective action decision document for Clean Slate 3; remediation of Clean Slate 1; and the assessment of Clean Slate 2. 	\$ 5,727	\$ 14,280	\$ 7,480
Total Large Site Remedial Action, Nevada	43,963	45,694	43,417
Large Site Decommissioning:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Provide for S&M of Nevada facilities. In FY 1996, initiated characterization of the Engine Maintenance and Disassembly Building to initiate D&D/closure; performed S&M on seven facilities. In FY 1997, continue D&D of the Engine Maintenance and Disassembly Building and provide for S&M of facilities. In FY 1998, D&D will be completed on two facilities, and S&M on remaining facilities will continue. 	381	50	2,983
Total Large Site Decommissioning, Nevada	381	50	2,983

Other Small Sites:		FY 1996	I	<u>Y 1997</u>	Ī	FY 1998
 Carry out activities at the Salmon Site in Mississippi. In FY 1996, continued field work for site characterization. In FY 1997, continue site characterization field work. In FY 1998, complete the RI/FS and initiate efforts on the Corrective Action Plan and Closure Report. 	\$	3,249	\$	610	\$	3,076
 Conduct remediation of surface and subsurface areas at various off-site nuclear test locations. In FY 1996, continued long-term monitoring at eight off-site test sites in five states; began characterization of mudpits at Central Nevada Test Area in Nevada; completed abandonment of the emplacement shaft at the Project Shoal Site; and completed remediation of the mudpit at Project Rulison in Colorado. In FY 1997, finish assessment of surface and subsurface at the Project Shoal site; complete assessment of surface areas at Central Nevada Test Area; conduct monitoring at eight off-sites in five states; expand sampling program at Amchitka Island, Alaska to include additional sites; and complete reanalysis of split samples from Greenpeace, at Amchitka Island, Alaska. In FY 1998, carry out long-term Hydrologic Monitoring Program for all sites except Amchitka; complete closure for Project Shoal Area and Central Nevada Test Area surface sites; and complete assessment of Salmon Site in Mississippi. 		3,147		8,260		4,924
Total Other Small Sites, Nevada	_	6,396		8,870		8,000
TOTAL, NEVADA	\$	50,740	\$	54,614	\$	54,400

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Remedial Action:

• The decision to perform cleanup of Clean Slates 1, 2, and 3 on the Tonopah Test Range as a single project achieves overall cost savings, but requires up-front funding for mobilization, assessment, and initiation of remediation in FY 1997; however, a lower level of funding in FY 1998 will be required once remediation is underway.	\$ -2,277
Large Site Decommissioning:	
 Increase in FY 1998 to complete closure of two additional facilities (the Super Kukla Reactor and the Environmental Protection Agency Farm). 	2,933
Other Small Sites:	
• A decrease in funding in FY 1998 assumes satisfactory resolution in FY 1997 of issues raised in the October, 1996 Greenpeace report concerning Amchitka Island, Alaska.	-870
Total Funding Change, Nevada	\$ -214

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

OAKLAND

I. <u>Mission Supporting Goals and Objectives</u>

The ER Program managed through the Oakland Operations Office supports activities at three sites in the State of California. These sites include: LLNL consisting of the Livermore Site and Site 300, a small portion of the Santa Susana Field Laboratory/Energy Technology Engineering Center (ETEC); and technical support efforts at Oakland Operations Office.

The LLNL occupies two sites in northern California. The Livermore Site has an area of approximately one square mile and is located 40 miles east of San Francisco, just east of the city of Livermore and is comprised of 119 release sites. Site 300, which comprises approximately 11 square miles, is located 15 miles southeast of the Livermore Site and is comprised of 72 release sites. Both LLNL sites are on the Environmental Protection Agency National Priorities List. The LLNL is a multi-disciplinary research laboratory, specializing in weapons research and development. ER activities at LLNL have been divided into seven different OUs (one at the Livermore Site; and six at Site 300). Remedial actions at LLNL primarily focus on contaminated ground water at the two LLNL sites. Through FY 1998, 74 release sites at the Livermore Site and 31 at Site 300 are forecast for completion.

The Santa Susana Field Laboratory is a 2,700 acre site located in Simi Valley, California, and is owned and operated by Rockwell International. Approximately 90 acres of the site has been furnished to the Department by Rockwell, for ETEC operation. ETEC has provided management, engineering, and project oversight on a wide range of Departmental programs involving the testing of nonradioactive components. Major ER efforts focus on cleanup for unrestricted use of the Rockwell Hot Lab, which supported past defense production/development activities. ETEC is comprised of seven release sites and 32 facilities. As of FY 1998, all release sites and 22 facilities are complete.

The Oakland Operations Office manages, coordinates, tracks, and assists in the implementation of the ER program among the California multiple sites. In addition, the Oakland Operations Office manages and implements grants for the State of California oversight activities. Major legal drivers at Oakland sites include FFAs, RCRA, the Toxic Substances Control Act, California Porter-Cologne Act, the Clean Water Act, and Nuclear Regulatory Commission license termination requirements.

II. Funding Schedule

Program Activity	F	FY 1996		Y 1997	F	FY 1998 \$ Change		Change	% Change
Large Site Remedial Action	\$	31,279	\$	23,313	\$	20,378	\$	-2,935	-13
Other Small Sites		3,500		1,000		0		-1,000	-100
Total, Oakland	\$	34,779	\$	24,313	\$	20,378	\$	-3,935	-16

III. Performance Summary

Large Site Remedial Action: FY 1996 FY 1997 FY 1998 \$ 12,710 14.757 12.827

- Carry out activities at the LLNL Livermore Site.
 - In FY 1996, conducted regulatory compliance activities under the terms of the FFA, such as monitoring, sampling, operations and maintenance, community relations, risk analysis, and report preparation; continued data collection/interpretation and well installation at five treatment facilities and Building 518; installed and connected the Treatment Facility C-North pipeline and began operation of the Portable Treatment Unit (PTU) G-1; issued the final compliance monitoring plan, completed the Draft Contingency PTU Plan, completed small equipment purchases for Trailer 5475 area, met all the requirements in the Remedial Action Implementation Plan schedule; and provided program management support.
 - In FY 1997, conduct FFA regulatory compliance activities, such as monitoring, sampling, operations and maintenance, community relations, risk analysis, and report preparation; continue operation and maintenance of five permanent ground water treatment facilities, one soil vapor treatment facility at Building 518 and PTUs at other locations; install hookups and begin operation of three new PTUs; complete and issue contingency plan and Remedial Design Report No. 4 to the regulators; begin fiveyear review of ROD; and provide for program management support.
 - In FY 1998, conduct FFA and ROD regulatory compliance activities, such as monitoring, sampling, operations and maintenance, community relations, risk analysis, and report preparation; support operation and maintenance of all stationary, and portable treatment facilities and soil vapor extraction systems; begin operation of two ground water PTUs and Trailer 5475 GWTF, finalize efforts in support of ROD five year review; and provide for program management support.

III. Performance Summary (Continued)

Large Site Remedial Action:		<u>]</u>	FY 1996		FY 1997		<u>FY 1998</u>	
Conduct activities at	at the LLNL Site 300.	\$	10,743	\$	9,197	\$	7,168	

- In FY 1996, continued ground water sampling and analysis and water level measurements to monitor site hydrogeology; developed, prepared and completed Proposed Plan and draft ROD for the General Services Area Site; continued removal actions at Eastern and Central General Service Areas; prepared and submitted Pit 6 Cap Design to regulators; installed monitoring wells in Building 815; prepared document for completion of characterization work at Building 850; completed Building 834 interim action; continued assessment field work for three OUs; and supported program management efforts.
- In FY 1997, continue ground water sampling and analysis and water level measurements to monitor site hydrogeology; complete ROD for the General Services Area OU and implement final remedial action; begin capping of Pit 6; implement remediation for process area/Building 815; complete Engineering Evaluation/Cost Analysis for Building 850; continue operation of the treatment facility; test technologies to monitor cleanup progress at Building 834; complete Building 823 removal action; complete all characterization work for Building 832 Canyon; finalize the HE Burn Pit Closure Plan procurement bid package; and provide for program management activities.
- In FY 1998, continue ground water sampling and analysis and water level measurements to monitor site hydrogeology; continue pump and treat as remedial action for Eastern and Central General Services Areas; complete capping of Pit 6; implement selected alternative for Building 850 removal action; continue operations of three ground water/soil vapor extraction treatment systems for contaminate isolation, removal and treatment; complete Site 300 Proposed Plan and draft ROD and provide for program management activities.
- Provide program direction expenses for Oakland Federal staff supporting ER activities.
 - Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management.

3.807 0 0

Large Site Remedial Action:	<u>FY 1996</u>	FY 1997	FY 1998
 Provide support to the Oakland Operations Office. In FY 1996, provided technical support to the operations office for cost estimating, reporting, and technical review; and provided funding via grants to State of California agencies for oversight activities. In FY 1997, provide technical support to the operations office for cost estimating, various reporting requirements, and technical review; and provide funding via grants to State of California agencies for oversight activities. In FY 1998, provide for the payment of State of California grants associated with the Federal Facility Agreements for two LLNL sites. 	\$ 442	\$ 569	\$ 500
 Provide crosscutting EM support efforts managed by Headquarters, but funded at Oakland. Headquarters-managed crosscutting requirements vary from year to year and site to site, and are determined during year of execution. (Pete Tribal College initiative and Hispanic Scholarship Fund. Activities continued in FY 1998 using Non-Defense funds.) 	1,530	720	0
Total Large Site Remedial Action, Oakland	31,279	23,313	20,378
Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Carry out activities at ETEC. In FY 1996, completed decontamination and dismantlement (D&D) of the above grade portion of the Rockwell Hot Lab (Building 020). In FY 1997, complete demolition of below grade portion of the Rockwell International Hot Lab D&D, final survey, independent verification, release, waste disposal and site regrading. 	3,500	1,000	0
Total Other Small Sites, Oakland	3,500	1,000	0
TOTAL, OAKLAND	<u>\$ 34,779</u>	<u>\$ 24,313</u>	\$ 20,378

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Remedial Action:

• The FY 1998 request reflects a reduction in Oakland support funding.	\$ -789
 Assessment work at several OUs will be completed at Site 300; however, the FY 1998 request reflects a reduced level of remediation effort at that site. 	 -2,146
Subtotal	-2,935
Other Small Sites:	
 The FY 1998 request reflects completion of the Rockwell Hot Lab at ETEC inFY 1997. 	-1,000
Subtotal	-1,000
Total Funding Change, Oakland	\$ -3,935

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

OAK RIDGE

I. <u>Mission Supporting Goals and Objectives</u>

The ER Program managed through the Oak Ridge Operations Office consists of four major sites in the state of Tennessee, and several off-site locations. These site responsibilities include the Y-12 site, the Oak Ridge National Laboratory (ORNL), the K-25 site the Oak Ridge Associated Universities site (ORAU), the Lower East Fork Poplar Creek, the David Witherspoon site, Atomic City Auto Parts, and the Center for Energy and Environmental Research in Puerto Rico. The Oak Ridge Reservation covers approximately 37,000 acres of Oak Ridge, Tennessee, and was placed on the National Priorities List in 1989. During its 50 years of operation, portions of the Oak Ridge Reservation have become contaminated with radioactive elements and these have been grouped into 423 release sites and 198 facilities. Through FY 1998, 25 release sites and 28 facilities at the Oak Ridge Reservation are forecast for completion.

The Y-12 site is approximately 811 acres and is located about two miles southwest of Oak Ridge, Tennessee. Y-12 has 15 OUs within three areas; Chestnut Ridge, Upper East Fork Poplar Creek, and Bear Creek Valley. The types of contamination include radioactive, hazardous, and mixed wastes.

The ORNL site is approximately 2,900 acres and is located about ten miles southwest of Oak Ridge, Tennessee. ORNL is divided into 20 WAGs. The types of contamination include low-level radioactive material, organic solvents, corrosive wastes, Polychlorinated Biphenyls, and heavy metals.

The K-25 site occupies 1,700 acres adjacent to the Clinch River, about 13 miles west of Oak Ridge, Tennessee. It was originally built to enrich uranium hexafluoride for Defense Programs. The majority of the 125 major buildings on the site are now inactive since production ceased in 1987. Only a small portion of K-25 activities are funded under the Defense appropriation, including centrifuge and landlord efforts. The majority of K-25 funding is requested under the Uranium Enrichment Decontamination and Decommissioning (UE D&D) appropriation account.

The ORAU site is a consortium of 82 colleges and universities that conducts research for DOE involving various radionuclides and chemicals. ORAU is comprised of seven release sites. Through the end of FY 1998 all seven release sites are projected for completion.

The Oak Ridge Operations Office manages, coordinates, tracks, and assists in the implementation of the ER program among the various sites. Efforts related to recycling of materials from the various Oak Ridge sites are also being supported, as well as crosscutting integration efforts related to the Oak Ridge sites. In addition, the Oak Ridge Operations Office manages oversight agreements with the States of Tennessee, Ohio, and Kentucky and provides funding for all off-site projects.

II. Funding Schedule

Program Activity	F	Y 1996	F	Y 1997	F	Y 1998	\$ Change	% C	hange
Large Site Remedial Action	\$	81,624	\$	68,770	\$	57,641	\$ -11,129	\$	-16
Large Site Decommissioning		17,556		9,797		6,511	-3,286		-34
Other Small Sites		41		0		0	0		0
Total, Oak Ridge	\$	99,221	\$	78,567	\$	64,152	\$ -14,415		-18

III. Performance Summary

Large Site Remedial Action:	<u>FY</u>	<u> 1996</u>	<u>F</u>	Y 1997	<u>F</u>	<u>Y 1998</u>
 Conduct remediation activities at Clinch River, Poplar Creek, and Watts Bar Reservoir. In FY 1996, the final draft of the Clinch River/Poplar Creek OU RI/FS and Proposed Plan were completed; and the Watts Bar monitoring and assessment program was initiated. In FY 1997, the draft ROD will be prepared and the Watts Bar monitoring and assessment program will continue. In FY 1998, activities will be conducted to complete and obtain approval for the ROD; the Watts Bar monitoring and assessment program will be modified and continued; and in support of remedial action efforts, development of a probabilistic risk approach and data call activities will be carried out. 	\$	563	\$	552	\$	269

3,522

5,877

1,273

- Carry out Lower East Fork Poplar Creek remediation activities.
 - In FY 1996, activities were conducted to initiate pre-design planning, the Title I design, and the Remedial Design Work Plan (RDWP).
 - In FY 1997, ground water wells will be plugged and abandoned; Title I design and RDWP activities
 will continue, access agreements will be obtained, contaminated areas and wetlands will be
 remediated/restored, and post-remediation monitoring will be initiated.
 - In FY 1998, post-remediation monitoring will continue.

Large Site Remedial Action:	<u>FY 199</u>	<u>6 FY 1</u>	997 FY 1998
 Conduct remediation activities at the Atomic City Auto Parts site. In FY 1996, the second sampling process was completed; Engineering Evaluation/Cost Analysis preparation and removal action activities continued. In FY 1997, work has been deferred to the outyears due to other higher priority site activities. In FY 1998, work has been deferred to the outyears due to other higher priority site activities. 	\$ 86	5 \$	0 \$ 0
 Perform Site 1630 Remediation Activities. In FY 1996, landfill items were inventoried, and preparation of the Phase II RI/FS was initiated; the Supplemental Field Work Plan for the David Witherspoon Site was initiated. In FY 1997, work has been deferred to the outyears due to other higher priority site activities. In FY 1998, work has been deferred to the outyears due to other higher priority site activities. 	1,30	0	0 0
 Conduct Site 901 remediation activities. In FY 1996, the site barrier was constructed; and the Phase II RI/FS report and Supplemental Work Plan were prepared. In FY 1997, the Phase II RI/FS report and Supplemental Work Plan will be finalized, preparation activities associated with the Site 901 D1 Phase II RI/FS report will be initiated, and field activities will continue. In FY 1998, work has been deferred to the outyears due to other higher priority site activities. 	5	0	449 0
 Carry out remediation activities at the Western Sewage Digester and ORTE. In FY 1996, the technical memorandum on Western Sewage Digester was prepared, digester content was characterized, and parts and machinery were decontaminated pursuant to the consent order for ORTE. In FY 1997, the remaining sludge will be removed from the digester tank, the interior will be characterized, and the digester tank structure will demolished and removed. Parts and machinery decontamination will be completed pursuant to the consent order for ORTE. 	41	1	141 0
 Provide for regulatory, technical, and management support, and perform required S&M associated with Y- 12 remediation activities. 	2,65	3 3,	,204 3,119

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	
 Conduct Y-12 Plant - Bear Creek Valley and Chestnut Ridge remediation activities. In FY 1996, the RDWP for Chestnut Ridge was initiated and the RODs for the Filled Coal Ash Pond and the Bear Creek Valley OU 2 were completed. In FY 1997, the Chestnut Ridge RDWP, the associated Remedial Action Work Plan, and Chestnut Ridge remediation will be completed. The Bear Creek OU 1 Remedial Investigation will be finalized, and preparation of the associated Feasibility Study and Proposed Plan will be initiated. In FY 1998, the Proposed Plan and ROD for Bear Creek Valley will be completed; continue compliance activities (i.e., Boneyard/Burnyard cleanup). 	\$ 7,465	\$ 13,056	\$ 10,089	
 Carry out Y-12, Upper East Fork Poplar Creek remediation activities. In FY 1996, activities were conducted to complete the OU 1 remedial investigation, the pipe relining of the Reduction of Mercury in Plant Effluents (RMPE), construction of the east-end treatment system, and closure of the Interim Drum Yard and Building 9409-5 Tank Storage Area. In FY 1997, work scheduled will be deferred to FY 1998 due to other higher priority site activities. In FY 1998, the draft integrated Remedial investigation and RMPE OF-51 treatment system will be completed; RMPE operations will resume and compliance driven activities will be carried out (i.e., Upper East Fork Poplar Creek soil, ground water remediation, firing range lead removal). 	9,778	0	14,673	
 Conduct required ground water monitoring and remediation related S&M at ORNL. FY 1997 and FY 1998 activities continued with non-defense funds. 	3,751	0	0	
 Carry out ORNL WAG 1 remediation activities. In FY 1996, well construction and sampling was initiated, and the removal of two inactive tanks was completed. In FY 1997, the ROD and RDWP for Surface Impoundments will be completed, and well construction and sampling will continue. In FY 1998, the Remedial Action Work Plan for the Surface Impoundments will be completed and field activities will commence; well construction and sampling will continue; and compliance driven activities will be performed (i.e., Bethel Valley Watershed ROD corehole and plume source). 	2,261	11,065	7,684	

In FY 1997, required S&M and D&D will be performed. In FY 1998, required S&M and D&D will be performed.

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct remediation activities at other ORNL WAGs. In FY 1996, the remedial investigation, surface water project plan, and the Environmental Restoration Monitoring and Assessment report for WAG 2 was prepared; the WAG 4 removal action was initiated and completed; the WAG 5 Engineering Evaluation/Cost Analysis and AM for Old Hydrofracture Facility Tank sludge removal will be completed; and In-situ Vitrification melt was performed at WAG 7, Pit 1. In FY 1997, activities will be conducted to support issuance of the RI/FS for WAG 2; sludge and liquid waste removal operations will be initiated and RD/RA and readiness assessment for Nuclear Facilities at WAG 5 will be carried out. In FY 1998, activities will be conducted to address White Oak Creek Watershed RI/FS comments and to prepare the Proposed Plan for WAG 2; compliance driven activities such as WAG 5 Old Hydrofracture Facility and pond remediation will continue. 	\$ 18,468	\$ 2,605	\$ 8,339
 Provided for program direction expenses for Oak Ridge Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	12,469	0	0
• Continue landlord support activities and continue required centrifuge S&M activities at K-25.	5,428	8,359	5,895
 Provide on-going site-wide integration and technical program support associated with: AIP grants; regulatory and ground water compliance; risk assessment; limited materials recycling programs (various Oak Ridge sites); and Oak Ridge Environmental Information Systems. 	12,640	23,462	6,300
Total Large Site Remedial Action, Oak Ridge	81,624	68,770	57,641
Large Site Decommissioning:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Perform Y-12 decommissioning activities. In FY 1996, two decommissioning Hazard Abatement (Tray Room Cleanup and Steam Coil Removal) interim actions were completed and required S&M was performed. 	\$ 4,869	\$ 6,932	\$ 3,733

Large Site Decommissioning:	FY 1996	<u>FY 1997</u>	FY 1998
 Carry out decommissioning at the ORNL Molten Salt Reactor Experiment to comply with the Defense Nuclear Facilities Safety Board recommendation 94-1. In FY 1996, the technical approach was selected for the uranium deposit removal action and the associated engineering evaluation/cost analysis was issued for review. Technical studies to identify options for dispositioning the fuel slats was initiated and the off-gas system partitioning interim action was completed. In FY 1997, complete initial reactive gas removal, and continue planning and documentation activities associated with the auxiliary charcoal uranium deposit removal and the fuel salts removal. In FY 1998, comparable activities will be continued with funds in the Non-Defense appropriation account. 	4,952	2,865	0
 Carry out various activities at K-25. In FY 1996, activities were conducted to stabilize facilities and carry out required facility S&M. In FY 1997, continue comparable efforts in the UE D&D account. In FY 1998, provide for required S&M. 	7,735	0	2,778
Total Large Site Decommissioning, Oak Ridge	17,556	9,797	6,511

Other Small Sites:	FY 1996			FY 1997	<u>FY 1998</u>		
 Decommissioning activities were completed at the Oak Ridge Associated Universities and the site was transferred back to the Department of Agriculture at the end of FY 1996. 	\$	41	\$	0	\$	0	
 Complete remediation activities and property transfer at the Puerto Rico Center for Energy and Environmental Research in FY 1997 (with carry over funds). 		0		0		0	
Total Other Small Sites, Oak Ridge		41		0		0	
TOTAL, OAK RIDGE	\$	99,221	\$	78,567	\$	64,152	
Explanation of Funding Changes FY 1997 to FY 1998:							
Large Site Remedial Action:							
Reduction to site-wide technical program support.				\$		-20,587	
 Remediation activities at Lower East Fork Poplar Creek will be completed in FY 1997, resulting in dec 	rease in	funding.				-4,604	
• Resume RMPE activities in FY 1998.						14,673	
 Increase in remediation activity at ORNL WAGs. 						1,853	
• Reduction to landlord support activities at K-25.						-2,464	
Subtotal						-11,129	

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Decommissioning:

Total Funding Change, Oak Ridge	\$	-14,415
Subtotal		-3,286
Reduction in ORNL decommissioning activities.	·	-2,865
 Additional K-25 Landlord funds are required for the construction of the new K-730 Substation, which will provide electricity to the entire area.)	2,778
• Special maintenance activities will not be required at Y-12 in FY 1998, that were required in FY 1997.	\$	-3,199

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

OHIO

I. <u>Mission Supporting Goals and Objectives</u>

The ER Program managed through the Ohio Operations Office supports activities at three sites in the State of Ohio. These sites are: the Fernald Environmental Management Project (FEMP), the Battelle Columbus Laboratory (BCL), and the Reactive Metals Incorporated (RMI) site. The Mound Laboratory was also included in the budget for FY 1996 and is in EM's Nuclear Materials and Facility Stabilization budget for FY 1997 and FY 1998.

The FEMP site, is approximately 1,050 acres, located 17 miles northwest of Cincinnati, Ohio. High-purity uranium metal products were produced at the FEMP site for the DOE and its predecessor agencies during the period 1951 to 1989. Thorium was also processed, but on a smaller scale, and is still stored on-site. Uranium processing operations at the FEMP were limited to a fenced, 136-acre tract known as the Production Area. The remaining FEMP site consists of waste storage and disposal areas and forest and pasture lands, a portion of which is leased for livestock grazing. In November 1989, the Environmental Protection Agency placed the FEMP site on the National Priorities List and in April 1990, DOE and the Environmental Protection Agency entered into a Consent Agreement (since amended) for site remediation. The Consent Agreement created five OUs covering total site remediation. The FEMP has implemented an accelerated cleanup schedule with completion of major site remediation scheduled by the end of 2008 and savings over \$2 billion compared to the previous baseline and associated total estimate cost. FEMP is comprised of 183 facilities and 30 release sites. Through FY 1998, 31 facilities and three release sites are forecast for completion.

BCL is comprised of two geographic sites (King Avenue and West Jefferson) located in Columbus, Ohio. Research and development work was performed at its facilities for the Department and its predecessors agencies. The buildings are privately-owned by Battelle and the facility retains an active Nuclear Regulatory Commission license for possession of special nuclear material. The BCL King Avenue site is comprised of ten facilities and the West Jefferson site is comprised of seven facilities. Both are radioactively-contaminated. Through FY 1998, all ten King Avenue facilities are forecast for completion, and three facilities are forecast for completion at the West Jefferson site.

The RMI site, located in Ashtabula, Ohio, is owned and operated by the RMI Titanium Company, and is contaminated with both radiological and hazardous materials resulting from previous operations from the DOE to shape nuclear materials. The ER mission at the site is to D&D the site for unrestricted use. RMI is comprised of 19 facilities and two release sites.

The Mound Laboratory is located in Miamisburg, Ohio approximately ten miles Southeast of Dayton, Ohio. All past production activities carried out at the Mound site have been transferred to other DOE sites and EM's current mission is to cleanup the site and make it available for other commercial use.

The Ohio Field Office manages, coordinates, tracks, and assists in the implementation of the ER program among the various sites. In addition, the Ohio Field Office provides for oversight activities for the State of Ohio.

II. Funding Schedule

Program Activity	I	FY 1996	I	FY 1997	1	FY 1998	\$ Change	% Change
Large Site Remedial Action	\$	307,016	\$	264,153	\$	225,400	\$ -38,753	-15
Large Site Decommissioning		3,689		0		0	0	0
Other Small Sites		18,812		22,205		20,037	 -2,168	-10
Total, Ohio	\$	329,517	\$	286,358	\$	245,437	\$ -40,921	-14

III. Performance Summary

Lar	Large Site Remedial Action:		FY 1996	FY 1997]	FY 1998
•	Continue OU 1 pit excavation, Alternate Remedial Action Subcontracting Approach implementation, and rail upgrade at Fernald.	\$	9,011	\$ 17,345	\$	11,045*
•	Continue OU 2 On-Site Disposal Facility construction and remediation efforts at Fernald.		8,480	22,250		21,908
•	 Conduct activities at the Residues Vitrification Pilot Plant for OU 4 at Fernald. In FY 1996, completed construction and operations of Phase I of the Plant. In FY 1997, initiate Phase 2 operations. In FY 1998, complete Phase 2 operations and begin engineering and construction of final remedial facility. 		33,757	22,210		20,746*
•	 Carry out D&D projects and assessment activities at Fernald. In FY 1996, continued Plant 1 & 4 D&D and completed the OU 3 ROD. In FY 1997, complete Plant 4 and Phase I of Plant 1; and initiate work on the Boiler Plant. In FY 1998, initiate Phase II of Plant 1; begin work on Plant 9/Thorium Package D&D complete work on the Boiler Plant Complex D&D. 		13,158	14,359		21,546
•	Continue Safe Shutdown Program activities at Fernald.	\$	8,551	\$ 8,579	\$	8,836

^{*} Assumes Privatization funds are available to support these actions, which are being requested in the Defense Environmental Management Privatization budget submission.

Large Site Remedial Action:	<u>]</u>	FY 1996	<u>FY 1997</u>	<u>FY 1998</u>
 Provide for waste water treatment systems and well field activities in the South Field Area at Fernald. In FY 1996, continued to operate water treatment systems, ground water monitoring and the well field completed construction and start-up of the Advanced Waste Water Treatment Dewatering Facility; initiated relocation of the Sewer Treatment Plant. In FY 1997, continue to operate water treatment systems, ground water monitoring and the well field initiate the Advanced Waste Water Treatment Expansion; and initiate construction of the regeneration system. In FY 1998, continue to operate water treatment systems, ground water monitoring and the well field initiate construction of the volatile organic compound treatment system; initiate construction of the FSES Pipeline and complete the Advanced Waste Water Treatment expansion; and continue construction of the regeneration system and initiate construction of the Sewer Treatment Plant. 	and ld; on	17,908	21,679	22,770
 Provide for disposition of low-level waste, which includes mixed waste, at Fernald. In FY 1996, processed and disposed of 309,000 cubic feet of waste. In FY 1997, process and dispose of 400,000 cubic feet of waste. In FY 1998, process and dispose of 190,000 cubic feet of waste. 		25,434	27,004	16,379
 Provide for soil excavation/remediation. In FY 1997, initiate soil remediation in Areas I and II and manage soil stock piles. In FY 1998, continue excavation/remediation of Areas I and II and manage soil stockpiles. 		0	4,908	4,735
• At the Mound Laboratory, implemented the ROD for OU 1; initiated removal action for OU 4; initiated additional removal actions; continued OU 5 and OU 9 remedial investigation/feasibility study; continued program management functions, community relations efforts and Geographic Information Systems development, and made 40 percent of the property releasable for sale or lease under CERCLA. Responsibility for the Mound Laboratory is transferred to EM's Office of Nuclear Materials and Facility Stabilization in FY 1997.	I	37,471	0	0
 Provided for program direction expenses for Ohio Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) is funded centrally under the Program Direction account within the Office of Environmental Management. 	\$	14,469	\$ 0	\$ 0

Laı	ge Site Remedial Action:	FY 1996	<u>FY 1997</u>	FY 1998
•	Continue project management activities; including conduct of operations, public affairs, quality assurance, legal affairs, finance, contracts and acquisitions, construction management, engineering management, project and information control, human resources and administration functions, and regulatory oversight at Fernald.	72,741	60,540	54,808
•	Continue base services activities including safety and health, emergency management, fire protection, radiological control, environmental monitoring in support of restoration activities, laboratory services, support projects, maintenance activities, utilities operations, water supply, sanitary sewer and sump, security and other miscellaneous activities at Fernald.	65,886	60,900	42,627
•	Provide for overall program management activities in support of the Ohio Field Office efforts.	150	4,379	0
	Total Large Site Remedial Action, Ohio	307,016	264,153	225,400

La	rge Site Decommissioning:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	
•	At the Mound Laboratory, continued assessment of Building 21, SW/WD Building underground lines and soils; continued D&D of SM Area; initiated D&D of Building 21; continued D&D of underground lines and soils; and continued program management of D&D activities. Responsibility for the Mound Laboratory is transferred to EM's Office of Nuclear Materials and Facility Stabilization in FY 1997.	\$ 3,689	\$ 0	\$ 0	
	Total Large Site Decommissioning, Ohio	3,689	0	0	
Otl	ner Small Sites:	FY 1996	<u>FY 1997</u>	<u>FY 1998</u>	
•	 Support disposition of waste materials at BCL In FY 1996, disposed of low level and radioactive mixed waste off-site. In FY 1997, continue disposal of low level and radioactive mixed waste off-site and initiate TRU waste planning and development leading to first TRU waste shipment off-site. In FY 1998, conduct waste segregation, sorting, and packaging of waste materials, and continue LLW and TRU waste shipments off-site. 	1,400	900	1,000	
•	 Carry out decontamination activities at the BCL King Avenue Site. In FY 1996, continued decontamination activities at the King Avenue buildings. In FY 1997, complete decontamination activities at the King Avenue buildings. 	7,998	3,705	0	
•	Initiate decontamination activities at the West Jefferson buildings, including material and equipment removal activities, health and safety support, emergency preparedness, site services, public relations, quality assurance, waste management, and project management activities, complete annual performance measures on time or ahead of schedule.	0	1,600	1,737	
•	Provide for financial coverage of restoration payments to Battelle, the facility private owner, for physical damages caused by decontamination activities at BCL.	0	0	2,300	

Other Small Sites:	<u>FY 1996</u>	<u>FY 1997</u>	FY 1998
 Conduct various assessment and remediation activities at RMI. In FY 1996, disposed of backlog uranium oxide, residues, and soils at RMI; continued soils assessment for Areas C and D and Phase I equipment and building remediation; and completed waste stream assessments for equipment and construction debris at RMI. Received conditional approval from the Environmental Protection Agency on the CAMUs. In FY 1997, complete soil assessments for Areas C and D, Phase I equipment remediation; initiate Phase II of building and equipment remediation activities; complete and verity the results of a Soil Washing Pilot Study; and continue CAMU activities. In FY 1998, continue Phase II of building and equipment remediation activities; begin on-site soil remediation; continue to remediate off-site soil contamination, complete and verify the results of; and continue CAMU activities. 	\$ 9,414	\$ 16,000	\$ 15,000
Total Other Small Sites, Ohio	18,812	22,205	20,037
TOTAL, OHIO	\$ 329,417	<u>\$ 286,358</u>	\$ 245,437
Explanation of Funding Changes FY 1997 to FY 1998:			
Large Site Remedial Action:			
 Majority of decrease is offset by proposed funding from the Defense Environmental Management Privation account. Two major activities at Fernald are requested in that budget for FY 1998. 	zation appropriat	tion \$	-38,753
Other Small Sites:			
 Decreased results from completion of decommissioning activities at the Columbus King Avenue site and remediation at the RMI site. 	deferral of equip	oment	-2,168
Total Funding Change, Ohio	• • • • • • • • • • • • • • • • • • • •	<u>\$</u>	-40,921

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

RICHLAND

I. <u>Mission Supporting Goals and Objectives</u>

The ER program managed through the Richland Operations Office supports activities at the Hanford site, located in Richland, Washington. The Hanford Restoration and Remedial Action Program includes remediation 1,079 of release sites potentially in need of remediation, and D&D of 259 surplus facilities at the Hanford site in southeastern Washington. The Hanford site covers 560 square miles. ER efforts include S&M, characterization, assessment, remediation, technology demonstration, and disposition of radioactive, hazardous, and mixed waste from various sites and facilities. Through FY 1998, 43 release sites and 20 facilities are forecast for completion.

Activities will also be carried out utilizing funds received from a non-federal source. The Department received \$6.2 million from the Washington Public Power Supply System for eventual decommissioning of part of the Hanford Generating Plant, which was operated in conjunction with the N Reactor to produce power for the Washington State area. This funding will be used in FY 1997 to initiate cleanup and/or removal of radioactively-contaminated systems at the Hanford Generating Plant and for characterization and remediation of any related contaminated SWMUs. The Richland Operations Office manages, coordinates, tracks, and assists in the implementation of the ER program at Hanford. In addition, the Richland Operations Office supports and manages oversight activities with the State of Washington.

II. <u>Funding Schedule</u>

Program Activity	F	FY 1996	I	FY 1997	I	FY 1998	\$ Change	% Change
Large Site Remedial Action	\$	111,699	\$	98,186	\$	96,356	\$ -1,830	-2
Large Site Decommissioning		45,544		35,963		35,946	-17	0
Total, Richland	\$	157,243	\$	134,149	\$	132,302	\$ -1,847	-1

II. Performance Summary

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	FY 1998
 Carry out activities at the Environmental Restoration Disposal Facility (ERDF) including. In FY 1996, provided engineering, technical support, construction management, administration, and program management during construction; completed construction; initiated operations and transportation of wastes to ERDF. In FY 1997, continue operation of ERDF and transportation of wastes to ERDF. In FY 1998, continue operation of ERDF and transportation of wastes to ERDF. 	\$ 14,938	\$ 14,841	\$ 15,492
 Carry out ground water and soil remediation activities in the 100-N area. In FY 1996, operated the pump and treat system at N Springs; completed limited field investigation for the 1301/1325 cribs; and began work on the Corrective Measures Study for the 100-NR-1 and 100-NR-2 OUs. In FY 1997, operate the pump and treat at N Springs; construct in-situ treatment zone as treatability test; begin preparation of RCRA Permit Modification and Proposed Plan; and complete the Corrective Measures Study for the 100-NR-1 and 100-NR-2 OUs. In FY 1998, operate the pump and treat system; remove in-situ treatment zone to complete treatability test; and begin remedial design for other N area waste sites. 	8,901	3,192	1,257
 Conduct strategy development and assessment for the 200 area soil waste sites. In FY 1996, initiated work with regulators on strategy for addressing the 32 OUs in the 200 area; continued monitoring of Hanford Prototype Barrier. In FY 1997, continue monitoring and testing of prototype barrier and development of strategy for 200 area remediation. In FY 1998, issue final report on prototype barrier; begin characterization and modeling of 216-B-3 pond for ground water impact; and prepare RFI/Corrective Measures Study work plans in accord with the Tri-Party Agreement for OUs PO-2, PO-4, and BP-2. 	777	1,671	1,329

III. Performance Summary (Continued)

La	Large Site Remedial Action:		FY 1996	<u>F</u>	Y 1997	<u>F</u>	<u>Y 1998</u>
•	 Carry out Ground Water Remediation and Monitoring in the 100 Area. In FY 1996, continued operation of pilot ground water treatment facilities for the 100-HR-3 and 100-KR-4 OUs; continued monitoring and conceptual site model development for 100-HR-3, KR-4, BC-5, and FR-3 OUs. In FY 1997, complete construction and begin operation of ground water treatment systems under Interim ROD for 100-HR-3 and 100-KR-4 OUs; continue monitoring and conceptual site model development for 100-HR-3, KR-4, BC-5, and FR-3 OUs. In FY 1998, continue operation of ground water treatment facilities for the 100-HR-3C and 100-KR-4 OUs; transfer monitoring and conceptual site model development for 100-HR-3, KR-4, BC-5, and FR-3 OUs to the Hanford site-wide ground water program. 	\$	3,722	\$	5,865	\$	4,384
•	 Conduct Hanford Site-Wide Ground Water Management efforts. In FY 1996, conducted screening assessment of contaminants for Columbia River Comprehensive Impact Assessment; carried out ground water monitoring activities including efforts in the 100 and 200 Area. In FY 1997, complete report on requirements for Columbia River Comprehensive Impact Assessment; conduct ground water monitoring activities in the 100 and 200 Area. In FY 1998, overall Hanford site-wide monitoring functions; site-wide ground water monitoring, well 		454		1,047		16,415

sampling, well drilling and abandonment and work done previously under separate activities in 100 and 200 Area OUs are being consolidated under this activity.

III. Performance Summary (Continued)

remedial action at ten OUs.

Large Site Remedial Action:		FY 1996	Ī	FY 1997	ļ	FY 1998
 Conduct Ground Water Remediation and Monitoring in the 200 Area. In FY 1996, completed corrective measure study (no interim action required) for 200-BP-5 and 200-PO-1 OUs; continued operation of the pilot ground water treatment system at 200-UP-1; upgraded and operated treatment system for 200-ZP-1 to 150 gpm; continued operation of the soil vapor extraction at 200-ZP-2; and continued monitoring and conceptual site model development for all OUs. In FY 1997, complete construction to transfer ground water to the Waste Management Effluent Treatment Facility and close out operation of pilot ground water treatment system at 200-UP-1; further upgrade and operate treatment system for 200-ZP-1 to 300-500 gpm; continue to operate the soil vapor extraction system at 200-ZP-2; and continue monitoring and conceptual site model development for all OUs. In FY 1998, continue operation of treatment facilities at 200- ZP-1 and 200-ZP-2 OUs; remediate the 200-UP-1 pilot system; and transfer monitoring and conceptual site model development to the Hanford site-wide ground water activity. 	\$	13,848	\$	4,666	\$	4,871
 Carry out assessment and remediation of 100 and 300 area waste sites. In FY 1996, conducted assessments at three OUs; completed assessments at seven OUs; continued remedial designs at two OUs; completed remedial designs at three OUs; completed remedial action at two OUs; started remedial action at three OUs; and continued remedial action at four OUs. In FY 1997, continue assessments at three OUs; start remedial design at one OU; complete remedial designs at three OUs; start remedial action at four OUs; complete remedial action at four OUs; and continue remedial action at three OUs. In FY 1998, continue assessments at two OUs; complete assessment at one OU; start remedial designs 		30,569		22,614		25,053

at two OUs; continue remedial action at one OU; start remedial action at two OUs; and complete

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	FY 1998	
 Provided for program direction expenses for Richland Federal staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	\$ 4,255	\$ 0	\$ 0	
 Provided funding for crosscutting EM support activities that are funded at Richland, but are Headquarters managed activities. Headquarters-managed crosscutting requirements vary from year to year and site to site, and are determined during year of execution. 	3,963	0	0	
 Provided program management for all Richland Hanford ER activities, including quality assurance and data management, direct project support, and NEPA documentation preparation; infrastructure development, and the State of Washington CERCLA grant. 	30,272	44,290	27,555	
Total Large Site Remedial Action, Richland	111,699	98,186	96,356	
Large Site Decommissioning:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>	
Conduct deactivation activities at N Reactor.	24,448	13,515	0	

- In FY 1996, continued deactivation activities, including cleanout of the fuel storage basin; deactivated and stabilized 21 facilities; and continued waste minimization; segregation; and compaction activities.
- In FY 1997, deactivation of remaining 14 facilities will be completed, including basin cleanup; this will complete the deactivation phase for the N Reactor and the reactor will be ready for eventual D&D.

Large Site Decommissioning:	FY 1996	<u>FY 1997</u>	FY 1998
 Perform S&M and corrective maintenance activities, safety assessments of inactive facilities in the 100 and 200 Areas, conduct remediation under the Radiation Area Remedial Action and Asbestos Abatement programs. In FY 1996, initiated and completed demolition of one facility; completed decontamination of two facilities; and performed reactor engineering for 105-C and began interim storage efforts. In FY 1997, begin D&D of ten facilities, completing two facilities; and initiate Phase I efforts at one additional facility. In FY 1998, complete D&D of six facilities; begin and complete D&D of two facilities; begin D&D of one facility; continue D&D of two facilities; continue 105-C interim storage; begin 105-F interim storage; perform reactor engineering activities; and carry out S&M activities on Purex facility transferred from EM's Nuclear Materials and Facility Stabilization Program. 	\$ 21,096	\$ 22,448	\$ 35,946
Total Large Site Decommissioning, Richland	45,544	35,963	35,946
TOTAL, RICHLAND	<u>\$ 157,243</u>	<u>\$ 134,149</u>	<u>\$ 132,302</u>
Explanation of Funding Changes FY 1997 to FY 1998:			
Large Site Remedial Action:			
 Funding for the ER program at Hanford decreases in FY 1998, but substantial physical cleanup work will the site, primarily in the reactor areas. Both remediation of OUs and decommissioning work will domina The shift toward spending more dollars on remedial activities is evidence of DOE fully implementing the which was negotiated with the regulators and stakeholders and emphasized the cleanup of sites near the O protection of site ground water. 	te FY 1998 effo ER refocusing s	rts. strategy,	-1,830
Subtotal			-1,830

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Decommissioning:

• S&M activities for the Purex Facility will be transferred from EM's Nuclear Materials and Facility Stabilization Program.	\$	6,200			
 Reduction of deactivation activities at N reactor (completed in FY 1997) 		-13,515			
• Increase in D&D activity in the 100 and 200 areas, along with additional reactor engineering activities		7,298			
Subtotal		-17			
Total Funding Change, Richland					

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

ROCKY FLATS

I. <u>Mission Supporting Goals and Objectives</u>

The Rocky Flats Environmental Technology Site is located 16 miles northwest of Denver, Colorado. The site comprises approximately 11 square miles, including a buffer zone between the site and its boundaries. The site, which includes former defense-related production facilities, was used to shape plutonium, fabricate alloy, and operate conventional metal production processes. When operations ceased, large amounts of plutonium, plutonium compounds, and metallic residues remained in the production lines, tanks, and process furnaces at various facilities at the site. Significant volumes of hazardous and radioactive waste generated during production operations were also present throughout numerous buildings. The Rocky Flats ER activities are comprised of 20 facilities and 158 release sites. Through FY 1998, three facilities and 69 release sites are forecast for completion. In addition, both hazardous and radioactive contamination exists in the site soil, sediments and ground water. With the discontinuation of nuclear weapons component production at Rocky Flats and consolidation of non-nuclear production activities at other sites, Rocky Flats' current mission is to manage the site waste and materials, and to clean up and convert the site to beneficial use in a manner that is safe, environmentally and socially responsible, physically secure, and cost effective.

The highest priority at Rocky Flats continues to be the protection of workers, the public, and the environment from exposure to plutonium and the potentially hazardous materials, and to safeguard plutonium from terrorists and espionage. This plus compliance with laws, legal agreements, DOE Orders, and other requirements that affect conduct of site activities are core activities, which form a significant portion of the site budget.

Effective in FY 1997, all activities at the Rocky Flats site were consolidated under the ER area of the budget. This includes the traditional ER remediation efforts, waste management functions, deactivation activities, and all other site support efforts. Liability reduction activities will focus on reducing risks and/or cost of core activities. Key risk reduction activities and strategies at the site include: preparing and packaging material for shipping hazardous and excess materials off site; consolidating plutonium in safer and easier to secure locations; converting plutonium liquids to a solid, safer and easier-to-handle form; providing ventilation of containers that have potential of hydrogen generation; and removing sources of contamination in the ground to cease or inhibit further spreading. Key core cost-reduction activities include: deactivating high upkeep facilities that are no longer needed; re-engineering processes and procedures for greater efficiency; and installing labor-saving technology and equipment.

The waste management program at Rocky Flats focuses on safe, compliant, and cost-effective waste minimization, storage, treatment, and disposal of low-level, mixed low-level, TRU, mixed TRU, hazardous, and sanitary waste. Rocky Flats has approximately 650 m³ of TRU waste, 16,500 m³ of mixed low-level waste, 550 m³ of mixed TRU-mixed waste, and 6,000 m³ of low-level waste stored on-site. The waste management program's near-term goals involve continuing treatment of hazardous and sanitary waste, off-site shipment and disposal of low-level waste, off-site treatment and disposal of mixed low-level waste, development of treatment capacity for mixed waste, and characterization and certification of TRU and mixed TRU waste for ultimate disposition at the Waste Isolation Pilot Plant in New Mexico.

I. <u>Mission Supporting Goals and Objectives</u> (Continued)

The ER program is working to assess and clean up the release sites identified at Rocky Flats and to conduct decommissioning activities in buildings where deactivation has been completed. The designated release sites were originally grouped into 16 OUs, three of which have been closed through No Further Action RODs. Under the Rocky Flats Cleanup Agreement, signed July 19, 1996, most of the remaining OUs have been grouped into two, the Industrial Area and the Buffer Zone. OUs 1, 3, 5, & 6 will have separate RODs because they were nearly complete at the time the agreement was signed.

II. Funding Schedule

Program Activity	F	FY 1996		FY 1997		FY 1998		Change	% Change	
Environmental Restoration	\$	74,639	\$	51,744	\$	53,150	\$	1,406	3	
Waste Management		0		63,160		68,172		5,012	8	
Nuclear Materials and Facility Stabilization		0		369,180		396,928		27,748	8	
Total, Rocky Flats	\$	74,639	\$	484,084	\$	518,250	\$	34,166	7	

III. Performance Summary

Environmental Restoration:				<u>FY 1997</u>		<u>FY 1998</u>	
•	Provide general site support, including agreement-in-principle funding and litigation support (In FY 1996, this activity was included in the Nuclear Materials and Facility Stabilization budget).	\$	0	\$	35,223	\$	32,629
•	Provide landlord function for buildings 120, T120A, 920, and their associated underground storage tanks. Perform annual inspection of the meteorological towers in western buffer zone and in the Woman Creek drainage area to ensure that the towers are safe.		579		60		68

Environmental Restoration:	<u>FY 1996</u>	FY 1997	FY 1998	
 Operate and maintain various areas, buildings, and facilities in the buffer zone, including the water management ponds, the property utility and storage yard, the interceptor trench system, the OU 2 water treatment facility, the storm water sampling stations; treat contaminated ground water collected from the OU 1 interim measure/interim remedial action and other site areas; and conduct accelerated remedial actions. In FY 1996, remediated two trenches, four Polychlorinated Biphenyl hot spots, and cleaned seven tanks; completed seep collection system for OU 7 (present landfill) In FY 1997, plan for and complete accelerated removal activities for the mound area and other release sites to reduce on-site contamination in OU 2 and the buffer zone. In FY 1998, plan for and complete remediation of three to six high-risk release sites. 	\$ 14,771	\$ 16,461	\$ 20,453	
 Decommission buildings and facilities. In FY 1996, completed decommissioning of Building 889, Tanks 222/224, and an electrical substation. In FY 1997, decommissioning activities will be performed with funds in the Privatization appropriation account. In FY 1998, decommissioning activities will be performed with funds in the Privatization appropriation account. 	7,080	0	0	
 Provided program management construction design, and related support of Environmental Restoration activities (Site-wide activities are included in the Nuclear Materials and Facility Stabilization section in FY 1997 and FY 1998). 	38,967	0	0	
 Provided program direction for Federal staff supporting ER activities at Rocky Flats. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	3,600	0	0	
 Managed solar pond waste and collected and treated interceptor trench groundwater; completed RFI/remedial investigation addendum. 	9,642	0	0	
Total Environmental Restoration, Rocky Flats	74,639	51,744	53,150	

Wa	Waste Management: (FY 1996 activities/funding are presented in the Waste Management budget)		FY 1996		<u>FY 1997</u>		<u>FY 1998</u>	
•	Continue support for base operations and maintenance of numerous waste storage areas across the site to maintain vital safety systems and meet health and safety requirements to ensure safe, compliant storage of backlog and newly generated LLW, mixed LLW, TRU and mixed TRU waste. Continue support for waste characterization, assay and documentation to meet on-site and off-site (the NTS, the Waste Isolation Pilot Plant, and commercial facilities) waste acceptance criteria. Continue support for aqueous and non-aqueous (sludge) waste processing in Buildings 374 and 774. Support off-site waste transportation and disposal of LLW, mixed LLW, TRU, mixed TRU, and hazardous waste, including initiation of shipments of TRU waste to the Waste Isolation Pilot Plant.	\$	0	\$	57,982	\$	66,946	
•	Complete capital equipment acquisition and general plant projects to support waste management activities.		0		2,118		0	
•	Predecisional efforts for a new TRU and mixed TRU waste storage facility will be initiated. Preparation of "scope and estimate" documentation outlining feasibility of new facility.		0		0		1,226	
•	Completion of a new sanitary landfill.		0		23		0	
•	Design of the Alternate Waste Treatment System to treat radioactive liquid waste and sludges expected to be generated during Rocky Flats Environmental Technology Site cleanup activities. No additional funding is required in FY 1998 due to use of uncosted carry over and revision of schedule, cost, and funding profiles for this project.		0		3,037		0	
	Total Waste Management, Rocky Flats		0		63,160		68,172	

	clear Materials and Facility Stabilization: (FY 1996 activities/funding are presented in the Nuclear terials and Facility Stabilization budget).	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
•	Maintain site infrastructure, including roads, steam plant, water system, safeguards and security, shipping and receiving, telecommunications, electricity, gas, food service, etc. Also, perform analytical services and maintain the analytical facilities, which sample more than 70,000 items per year for nuclear material stabilization, residue elimination, waste management, and other site programs.	\$ 0	\$ 73,386	\$ 71,153
•	Provide support for environmental compliance and monitoring activities as required by the Clean Air Act, the Clean Water Act, NEPA and DOE orders, such as air and water monitoring, discharge monitoring of 150 million gallons of water, preparation of chemical monitoring reports, environmental dose assessments, dam inspection, support site-wide engineering and construction oversight, RCRA permitting, nuclear criticality safety, fire protection engineering, and radiation protection activities.	0	49,767	51,260
•	In FY 1997, complete construction and project closeout on the Infrastructure Replacement project. No infrastructure construction projects are planned in FY 1998.	0	890	0
•	Conceptual design efforts will continue and be completed in FY 1998 on a new passive interim storage vault for plutonium.	0	3,866	2,451
•	Design and construct upgrades to Building 371 heating, ventilation, and air conditioning, criticality detection, fire suppression, water piping, structural and subsurface drainage systems and storage vault to make Building 371 suitable for interim storage of the site's Category I and II special nuclear material.	0	3,238	10,492
•	Provide for building baseline activities, deactivation, and hazardous material removal necessary to ensure building/systems in the nuclear production zone are maintained in a safe, secure, and environmentally compliant status.	0	85,786	104,517
•	Provide for building baseline activities, deactivation, and hazardous material removal necessary to ensure building/systems in the industrial zone are maintained in a safe, secure, and environmentally compliant status.	0	18,895	23,473
•	Complete construction and start-up of all solid residue stabilization and processing systems.	0	42,184	12,137

	clear Materials and Facility Stabilization: (FY 1996 activities/funding are presented in the Nuclear terials and Facility Stabilization budget).	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
•	 Continue stabilization activities for nuclear material as described in the Department's Implementation Plan for Defense Nuclear Facilities Safety Board recommendation 94-1: In FY 1997, stabilize 18,000 liters of high-hazard plutonium solutions; complete installation of the Plutonium Stabilization and Packaging Prototype in Building 707; continue HSP 31.11 compliance program, which includes surveillance of plutonium metal items and repackaging and stabilization as necessary; and startup of process operations for stabilizing high-risk plutonium residues. In FY 1998, stabilize 18,000 liters of high-hazard plutonium solutions; operate the Plutonium Stabilization and Packaging Prototype and full-scale operation of the high-risk residue processing systems. 	\$ 0	\$ 85,916	\$ 106,885
•	Under the Master Safeguards and Security Agreement project, continue design of the Plutonium Stabilization and Packaging Processing System in Building 371.	0	2,079	2,510
•	Design and fabricate Plant Fire/Security System.	0	2,938	6,500
•	Initiate installation of criticality Alarms and Plant Annunciation Systems Project.	0	235	5,550
	Total Nuclear Materials and Facility Stabilization, Rocky Flats	0	369,180	396,928
то	TAL, ROCKY FLATS	\$ 74,639	\$ 484,084	\$ 518,250

III. Performance Summary (Continued)

Prior Year Construction Projects:

Detailed below is the status of prior year construction project activities at the Rocky Flats site.

Construction Project	TPC	Previous Yrs Costs	FY 1996 Costs	FY 1997 BA	FY 1998 BA	Outyears BA	Construction Start	Construction Complete
Criticality Alarms and Plant Annunciation System Upgrades (91-D-127)	\$15,500	\$2,035	\$2,237	\$235	\$5,550	\$617	3rd Q FY 96	2nd Q FY 99

<u>Description</u>: This project has two subprojects which support the short and long-term site objectives (1) Replace or upgrade the deteriorated Criticality Alarm System and Plant Annunciation systems at Rocky Flats; and (2) provide a plant-wide communication network using fiber optic technology which provides for safety, security, and communications systems required for site operations. Both subprojects have been descoped to provide minimal upgrades in accordance with the RF Closure Project timelines and objectives (ADS RF-6756).

Plant Fire/Security Replacement	\$47,300	\$5,781	\$3,387	\$2,938	\$6,500	\$16,435	3rd Q FY 96	3rd Q FY 00
(92-D-123)								

<u>Description</u>: This project will provide a replacement of the existing security alarm, fire alarm, and personnel access control systems including Portal access, and will reconfigure the Protected Area. It includes replacement of central monitoring stations, data communications media, multiplex panels, and a majority of the local and fire security panels and sensors. The fire system will use a commercially-available fire monitoring system, and the security system will use the ARGUS security system. The existing alarm systems are outdated, are no longer supported by the vendor, and are difficult and expensive to maintain and operate. Both systems are out of compliance with DOE Orders and National Fire Protection Association criteria. The project is currently being rescoped to comply with the DOE mandate to use the ARGUS security system to provide minimal upgrades to accommodate Closure Project schedule and other objectives (ADS RF-6755).

Master Safeguards and Security	\$57,500	\$6,970	\$4,092	\$2,079	\$2,510	\$39,770	4th Q FY 94	4th Q FY 01
Agreement Upgrades								
(92-D-125)								

<u>Description</u>: This project contains 26 subprojects which will increase the security and safety of Special Nuclear Material, vital equipment, classified matter, and government property at the site in accordance with the 1987 Master Safeguards and Security Agreement. There are 5 functional groups of subprojects: (1) Alarms and Alarm System Support, (2) Protective Force Support, (3) Nuclear Material Accountability Systems, (4) Physical Protection and TSCM, and (5) Access Control (ADS RF-6757).

III. Performance Summary (Continued)

Construction	TPC	Previous Yrs	FY 1996	FY 1997 BA	FY 1998 BA	Outyears BA	Construction	Construction
Project		Costs	Costs				Start	Complete
Liquid Waste Treatment Facility Upgrade (93-D-178)	\$33,238	\$6,637	-\$338	\$3,037	\$0	\$15,174	4th Q FY 97	3rd Q FY 00

Description: This project will treat wastewater and sludge at the site and will eliminate more costly upgrades to the current treatment facility. The project has three separate subprojects (1) Building 910 Upgrade, which will treat the low-level wastewater and industrial wastewater. The building currently contains three evaporator trains which will be upgraded to accommodate the projected waste streams; (2) Temporary Sludge Immobilization System, which will process low-level/low-level mixed radioactive waste sludges and TRU/TRU Mixed Radioactive mixed waste sludges from the existing inventories, future and backlogged LLMW drums by dewatering and immobilizing the sludges using a cementation process for solid waste disposal); (3) Valve Vault Modifications to transport the high-level aqueous waste to Building 774 and the low-level radionuclide concentrations exceeding 910 acceptance criteria (ADS RF-3829).

Infrastructure Replacement	\$35,302	\$29,525	\$4,540	\$890	\$0	\$0	4th Q FY 88	4th Q FY 98
(94-D-451)								

Description: This project replaces electrical, mechanical or other infrastructure systems to manage the continuing deterioration of the aging facilities. Many of the subprojects originated within the Facilities Capabilities Assurance Program and General Plant Project Program. As an environmental site transitioning to D&D or reuse, the planned activities require that vital safety and utility systems remain operational in order to ensure worker safety and health and protection to the public. Of the three subprojects included within this project, two are completed, including the Central Steam Plant Renovation and Building Electrical Rehabilitation. The third subproject, Electrical Distribution System Replacement and Upgrade, installs a new central 115/13.8kv substation and will reconfigure the site electrical overhead distribution system to support the Ten-Year and longer-term objectives of the site (ADS RF-6751).

Immobilization of Miscel-	\$20,357	\$0	\$108	\$0	\$0	\$19,352	2nd Q FY 98	2nd Q FY 02
laneous Wastes (96-D-407)								

<u>Description</u>: This project will provide a system to treat and solidify low-level mixed wastes as required by the site treatment plan and annual progress report work plan which superseded the Comprehensive Treatment and Management Plan. This project addresses cementation and polymer solidification technologies for immobilizing LLMW utilizing commercially available equipment to comply with the RCRA Land Disposal Restrictions requirements and the Nevada Test Site Waste Acceptance Criteria (ADS RF-3831).

Residue Elimination Project	\$87,307	\$0	\$15,257	\$42,184	\$12,137	\$0	2nd Q FY 96	1st Q FY 98
(06 D 468)								

Description: The residues previously generated as a result of Pu manufacturing operations at Rocky Flats were packaged for brief storage (less than three years) to await processing for Pu recovery. Since the shutdown of Pu operations at the site in 1989, these materials have been stored in temporary storage packaging, which are known to be unsafe for extended storage. The timely treatment and elimination of residues has been mandated by DNFSB 94-3 and the Residue Compliance Agreement with Colorado. This project will provide the capability to treat residues so they can be safely stored on-site for an interim period and ultimately shipped to other locations. Four subprojects will construct facilities for residue processing: (1) Salt Residue Stabilization and Repack, (2) Wet/Combustible Residue Stabilization and Repack, (3) Ash Residue Stabilization and Repack, and (4) Classified Shapes Residue and Repack and Interim Storage (ADS RF-6723).

Plutonium Interim Storage Vault	\$60,510	\$0	\$0	\$3,866	\$2,451	\$54,193	2nd Q FY 98	3rd Q FY 01
(97-D-405)								

III. Performance Summary (Continued)

Construction	TPC	Previous Yrs	FY 1996	FY 1997 BA	FY 1998 BA	Outyears BA	Construction	Construction
Project		Costs	Costs				Start	Complete

<u>Description</u>: This project provides a facility suitable for interim storage of plutonium at the site which is more cost effective than Building 371 provided an alternative national plan is not implemented. All plutonium will be consolidated in the Interim Storage vault until long term disposition options are selected. The facility includes capacity for 14 tons of plutonium in a combination of DOE Standard 3013 containers and ALR8 pit storage containers, shipping and receiving, safety systems, safeguards and security, and compliance to International Atomic Energy Agency (IAEA) surveillance requirements. The facility will be a passive type design that implements a denial security strategy (ADS RF-1142-B).

B/371 Near-Term Safety \$13,730 \$0 \$0 \$3,238 \$10,492 \$0 1st Q FY 98 3rd Q FY 99 Upgrades (97-D-406)

<u>Description</u>: This project provides judicious upgrades to Building 371 to reduce safety risks associated with planned processing and near-term storage consolidation of SNM. Risk reduction upgrades include: fire barriers and fire suppression for compliance to National Fire Protection Association criteria; HVAC repair and modification to improve system availability; installation of seismic equipment supports and structural seismic upgrades; inspection of external drain systems that prevent building structural damage from excessive ground water hydrostatic pressure; and operability improvements (ADS RF-1142-C).

Explanation of Funding Changes FY 1997 to FY 1998:

Environmental Restoration:

•	Decrease due to reduction support service requirements.	\$ -2,594
•	Increase due to escalation and minor changes in requirements.	8
•	Complete additional remediation activities of three to six high risk release sites.	3,992
Su	ahtotal	1 406

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Waste Management:

•	Increase due to characterization activities for off-site disposal and actual transport and disposal of waste off-site, including initiation of TRU shipments to the Waste Isolation Pilot Plant.	\$ 8,964
•	Decrease due to completion of equipment acquisition required to support the waste management activities.	-2,118
•	Increase due to initiation of TRU and mixed TRU waste storage facility feasibility study.	1,226
•	Decrease due to landfill completion.	-23
•	Decrease due to revisions to funding and cost profiles for the Alternate Waste Treatment System.	 -3,037
Su	btotal	5,012
Nuclear	Materials and Facility Stabilization:	
•	Decrease in funding is due to the reduction in infrastructure and site services requirements to support all EM programs.	-2,233
•	Increased funding for environmental compliance and monitoring support is due to inflation and increased health and safety monitoring activities required during deactivation and decommissioning activities.	1,493
•	Funding decrease due to completion of projects and project closeout in FY 1997.	-890
•	Conceptual design activities will be completed in FY 1998 and funding has been decreased accordingly.	-1,415
•	Funding has been increased to support continued priority safety upgrades of Building 371 for interim storage of plutonium.	7,254
•	Increase in funding results from 1) higher building support costs (e.g., maintenance, operating, engineering, radiation monitoring) as the plutonium stabilization operations increase; 2) increased deactivation costs associated with hazardous material removal; and 3) completion of deactivation operations in Building 886.	18,731
•	Increase in funding is due to the initiation of deactivation activities in the Industrial Area.	4,578

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Nuclear Materials and Facility Stabilization: (Continued)

 Funding for construction of solid residue stabilization and processing systems decreased due to completion of construction activities. 	on \$	-30,047				
 Increase in 94-1 stabilization activities is due to operation of the prototype plutonium packaging system, operations of al residue stabilization processing systems, and continuation of solution stabilization activities. 	ll solid	20,969				
 Increased funding for design and fabrication of the plutonium packaging system in Building 371 due to inflation. 		431				
• Increase in funding is due to the start of installation of the Plant Fire/Security System.		3,562				
 Increase in funding is due to installation of the criticality Alarms and Plant Annunciation Systems Project. 		5,315				
Subtotal		27,748				
Total Funding Change, Rocky Flats						

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

SAVANNAH RIVER

I. <u>Mission Supporting Goals and Objectives</u>

The Savannah River Site (SRS) is located in south-central South Carolina and is bordered on the southeastern side by the Savannah River. The closest major population centers are Aiken, South Carolina and Augusta, Georgia. The SRS produced nuclear materials, primarily tritium and plutonium, in support of national defense projects for over 40 years. The ER Program is responsible for all aspects of assessment and remediation of facilities and sites that are no longer a part of active operations at SRS. ER responsibilities include 373 release sites and one facility. Through FY 1998, 59 release sites are forecast for completion.

ER activities are grouped into nine WAGs. WAG 1, A/M Area is composed of the main administrative area for SRS and an area previously used to produce fuel and target assemblies. WAG 2, Central Shops Area is primarily used as a storage and warehouse area for various support items. WAG 3, Reactor Units, encompasses the area occupied by the five production nuclear reactors. WAG 4, General Separations Area, includes the primary separations operations located in F- and H-Areas. These facilities separated and processed plutonium, tritium, and uranium from irradiated assemblies. WAG 5, TNX and D-Area, include the central powerhouse and heavy water facilities and the Savannah River Technology Center, which houses applied research and development programs. WAG 6, Miscellaneous Units, include acid/caustic basins, rubble pits and piles, coal pile runoff basins, and chemicals, metals, and pesticide sites located throughout the site. WAG 7, Site Evaluation Units, includes the evaluation, assessment, of potentially contaminated sites and the remediation of those sites requiring remediation. Also included are S&M of all remedial action sites (excluding decommissioning facilities). WAG 8, Program Management, provides the ER Program's program management-level support activities, including program and project controls, public involvement, regulatory compliance, quality assurance, cost-estimating, and operations support. WAG 9, Decontamination and Decommissioning, includes all decommissioning activities for the program.

Primary on-site contaminants include various nuclides (particularly plutonium, tritium, and uranium), volatile organic compounds, heavy metals, and solvents. Legal drivers for activities conducted at SRS include RCRA, CERCLA, and the site FFA (August, 1993) and various settlement agreements.

II. Funding Schedule

Program Activity	F	Y 1996	1	FY 1997	<u>I</u>	FY 1998	\$ Change	% Change
Large Site Remedial Action	\$	87,416	\$	104,306	\$	103,273	\$ -1,033	-1
Large Site Decommissioning		1,603		10,927		2,622	-8,305	-76
Total, Savannah River	\$	89,019	\$	115,233	\$	105,895	\$ -9,338	-8

retention basins will continue.

and Ash Basins will be prepared.

III. Performance Summary

Large Site Remedial Action:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct site characterization activities and assessments associated with the Savannah River Laboratory (SRL), TNX, Coal Pile Runoff, Ash, Acid/Caustic, Oil/Chemical, Reactor, and Separation Area Basins. In FY 1996, site characterizations continued on the R & K-Reactor Seepage Basins, the F/H Retention Basin, the Warners Pond, the New and Old TNX Basins, the Coal Pile Runoff basin, and the Miscellaneous Chemical/Metal Burn Pit; characterization efforts on the D-Area Oil Seepage Basin were completed. In FY 1997, characterization and technology selection activities will continue for the mixed waste management facility ground water, the reactor basins, the separations basins, the L-area oil and chemical basin, the SRL seepage basin, and the coal pile runoff basins; characterization of acid/caustic basins will be completed. In FY 1998, characterization of F/H Retention Basin, the R-Reactor Seepage Basin, the F/H Inactive Process Sewer, the SRL & TNX Basins, and the Coal Pile Runoff & Ash Basin will continue; characterization of the Oil & Chemical Basins will be completed; in support of remedial actions development of a probabilistic risk approach and data collection activities will be carried out. 	\$ 13,911	\$ 13,345	\$ 9,888
 Conduct remediation design activities and construction associated with the SRL, TNX, Coal Pile Runoff, Ash, Acid/Caustic, Oil/Chemical, Reactor, and Separation Area Basins. In FY 1996, detailed engineering and pre-construction activities were initiated for remediation of the Old F Area Seepage Basin and F/H Retention Basins; remediation construction at the F, H, K, & P Acid/Caustic Basins, and the Oil & Chemical Basins continued. In FY 1997, closure construction for the acid/caustic basins will be completed; construction and remediation activities associated with the SRL, TNX, coal pile runoff, and oil/chemical basins will 	5,515	8,227	7,751

continue; pre-construction and design activities associated with the old F-Area seepage basins and F/H

In FY 1998, remediation construction associated with the Old F Area Seepage Basin and F/H Retention Basins will be initiated; remediation design and pre-construction activities associated with the F&H Inactive Process Sewer Lines and TNX Seepage Basins will be initiated; and regulatory documents associated with the Acid/Caustic Basins, Oil & Chemical Basins/Metal Burn Pits, and Coal Pile Runoff

III. Performance Summary (Continued)

Large Site Remedial Action:	FY 1996	Ī	FY 1997	<u>F</u>	Y 1998
 Conduct required feasibility and treatability studies, design, engineering, site characterization, and assessment activities associated with the Burning Pits and Rubble Pits and Piles. In FY 1996, activities to characterize, evaluate, and document analyses in accordance with regulatory requirements were conducted; characterization was completed at the Burma Road Rubble Pit. In FY 1997, activities to characterize, evaluate, and document analyses in accordance with regulatory requirements will continue; characterization efforts will be completed at the D, F, and Central Shops Pits. In FY 1998, activities to characterize, evaluate and document analyses in accordance with regulatory requirements will continue; characterization activities will be complete at the A Area and Chemical Pits. 	\$ 5,739	\$	6,379	\$	10,974
 Carry out remediation and construction activities associated with the Burning Pits and Rubble Pits and Piles. In FY 1996, detailed engineering for the Silverton Road waste site and the Burma Road rubble pit remediation were completed. In FY 1997, carry out preliminary engineering and work plan development for the A, L, P, central shops, and Bingham pump rubble pits and piles . In FY 1998, remediation of the D&F area pits will be completed; required Approved Standardized Corrective Action Design documents will be prepared; and the RODs for the burning pits and rubble pits and piles will be issued. 	745		6,800		4,764
 Perform required design, engineering, characterization, and assessment activities associated with the radiological and non-radiological burial grounds, storage tanks, and minimal action units. In FY 1996, assessments of Tanks 16 and 37, and M Area west were completed; site characterization and assessment activities associated with the burial grounds, storage tanks, and minimal action units continued. In FY 1997, assessments of gunsite 113, 720, and the Grace Road waste site will be completed; required characterization, assessment, and analyses associated with the burial grounds and storage tanks will continue. 	661		2,028		2,122

In FY 1998, the assessment for the sanitary landfill will be completed; required characterization, assessment, and analyses associated with the burial grounds and storage tanks will continue.

La	ge Site Remedial Action:		<u>FY 1996</u> <u>FY 199</u>		FY 1997	FY 1998	
•	 Conduct remediation and construction activities associated with the radiological and non-radiological burial grounds, storage tanks, and minimal action units. In FY 1996, remediation activities associated with the Tanks 16, 37, and M Area west were completed; the Low-level Radioactive Waste Disposal Facility Interim Action was initiated; and remediation construction activities associated with the sanitary landfill and storage tanks continued. In FY 1997, the final closure cap system will be installed for the LLW disposal facility and an interim native soil cover will be installed over the old radioactive burial ground; remediation of Gunsite 113, 720, and the Grace Road waste sites will be completed; and remediation construction activities associated with the sanitary landfill and storage tanks will continue. In FY 1998, remediation of the sanitary landfill will be completed; the ROD for the Non-radiological Burial Ground will be issued; and remediation activities associated with the LLW disposal facility and storage tanks will continue. 	\$	10,902	\$	15,167	\$	10,106
•	Conduct required ground water characterization associated with the Reactor areas, SRL (300/700 Area), TNX (400 Area), and the Sanitary Landfill (600 Area).		7,445		9,045		6,656
•	 Provide for ground water treatment construction and operations. In FY 1996, M-1 air stripper and purge water disposal station operations continued; construction of a new ground water unit to address the SRL ground water situation was completed; TNX pump and treat operations continued; and construction and startup activities associated with the F&H ground water project continued. In FY 1997, construction of five new ground water treatment systems will be completed; existing system operations at TNX, SRL, and the sanitary landfill will continue. In FY 1998, system operations to address ground water contamination will continue. 		13,058		18,330		8,791
•	Conduct required RCRA/CERCLA waste site evaluations.		10,974		7,655		18,786
•	Provide for DOE site-wide program management and control activities and provide for the FFA and AIPs state grants.		9,241		4,777		8,575
•	Carry out required post-closure S&M, well sampling and analysis, and RCRA ground water well maintenance.		5,316		5,513		6,800
•	Provide for management of ER-generated waste (Waste Management Re-engineering)	\$	0	\$	0	\$	1,020

Large Site Remedial Action:	<u>FY 1996</u>	FY 1997	FY 1998
 Provide for program direction expenses for Savannah River staff supporting ER activities. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, a contractual services) will be funded centrally under the Program Direction account within Environmental Management. 		0	0
 Provide for EM crosscutting program requirements (i.e, Massie Chair of Excellence, Medical Usouth Carolina Cooperative Agreement). 	University of 565	7,040	7,040
Total Large Site Remedial Action, Savannah River	87,416	104,306	103,273
Large Site Decommissioning:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
 Conduct S&M activities for the C, P, and R Reactors. In FY 1996, responsibility for the reactors was held by EM's Office of Nuclear Materials Stabilization. In FY 1997, ER accepted responsibility for the reactors and will conduct S&M activities. In FY 1998, responsibility for the reactors was transferred back to EM's Office of Nuclea and Facility Stabilization. 	·	8,973	0
Provide post-closure management activities.	1,603	1,954	2,622
Total Large Site Decommissioning, Savannah River	1,603	10,927	2,622
TOTAL, SAVANNAH RIVER	\$ 89,019	\$ 115,233	\$ 105,895

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Large Site Remedial Action:

 Reduction in characterization activities and assessments associated with Acid/Caustic basins and the Separations Area basins; reduction in construction activities with the Burning Pits and Rubble Pits and Piles; and completion of construction of ground water treatment systems. Large Site Decommissioning: 	\$ -1,033
 Transfer financial responsibility of C, P, and R reactors from ER to EM's Nuclear Materials Stabilization program. 	-8,305
Total Funding Change, Savannah River	\$ -9,338

ENVIRONMENTAL RESTORATION - DEFENSE (Dollars in Thousands)

HEADQUARTERS

I. <u>Mission Supporting Goals and Objectives</u>

Activities supported through Headquarters includes budgeting for the Federal Government's Contribution to the UE D&D appropriation account and essential technical support for a number of crosscutting functions which support the overall ER Program.

II. Funding Schedule

Program Activity	_ <u>I</u>	FY 1996	1	FY 1997	F	FY 1998	\$ Change	% Change
Other Small Sites	\$	8,000	\$	8,000	\$	0	\$ -8,000	-100
Federal Contribution to UE D&D Account		350,000		376,648		388,000	11,352	3
Other Crosscutting Activities		33,305		5,977		807	 -5,170	-86
Total, Headquarters	\$	391,305	\$	390,625	\$	388,807	\$ -1,818	0

III. Performance Summary

0	ther Small Sites:	<u>]</u>	FY 1996	F	Y 1997	<u>FY</u>	<u>7 1998</u>
•	Provide funding for partial PRP payment of DOE's share of the cleanup at the Maxey Flats site in Kentucky. Responsibility for this activity will be transferred to ER's DOE-AL/Grand Junction Office in FY 1998.	\$	8,000	\$	8,000	\$	0
	Total Other Small Sites, Headquarters		8,000		8,000		0

ENVIRONMENTAL RESTORATION - DEFENSE, HEADQUARTERS (Continued)

Fee	deral Contribution to UE D&D Account:	<u>FY 1996</u>	FY 1997	FY 1998
•	Provide the Federal Government contribution to the UE D&D appropriation account. The actual workscope planned for FY 1997/FY 1998 and activities performed in FY 1996 are presented in the UE D&D Program Performance Summary budget document.	\$ 350,000	\$ 376,648	\$ 388,000
	Total Federal Contribution to UE D&D Account, Headquarters	350,000	376,648	388,000
<u>Ot</u>	her Crosscutting Activities:	<u>FY 1996</u>	<u>FY 1997</u>	<u>FY 1998</u>
•	Provided support of the Agency for Toxic Substances and Disease Registry (health studies); program management plans and procedures; management support systems; strategic planning; performance systems; cost/schedule studies; and Hazwoper worker training.	8,000	1,000	807
•	 Provided for program direction expenses for Headquarters Federal staff directly supporting the ER Program. Beginning in FY 1997, program direction (consisting of Federal salaries, benefits, travel, and contractual services) will be funded centrally under the Program Direction account within the Office of Environmental Management. 	12,342	0	0
•	Provide technical support to the Office of ER in the areas of document review, program integration, and other crosscutting areas.	6,056	2,898	0
•	Headquarters-directed activities at the Field Offices including specific technical support and program integration.	6,907	2,079	0
	Total Other, Headquarters	33,305	5,977	807
TC	OTAL, HEADQUARTERS	\$ 391,305	\$ 390,625	\$ 388,807

ENVIRONMENTAL RESTORATION - DEFENSE, HEADQUARTERS (Continued)

III. Performance Summary (Continued)

Explanation of Funding Changes FY 1997 to FY 1998:

Other Small Sites:

 Transfer to DOE-AL/Grand Junction Office responsibility for partial PRP payment for DOE's share of cleanup at the Maxey Flats site in Kentucky. 	\$ -8,000
Federal Contribution to UE D&D Account:	
 Increase in Government contribution to the UE D&D account. 	11,352
Other Crosscutting Activities:	
Reduction to technical support activities.	-5,170
Total Funding Change, Headquarters	\$ -1,818